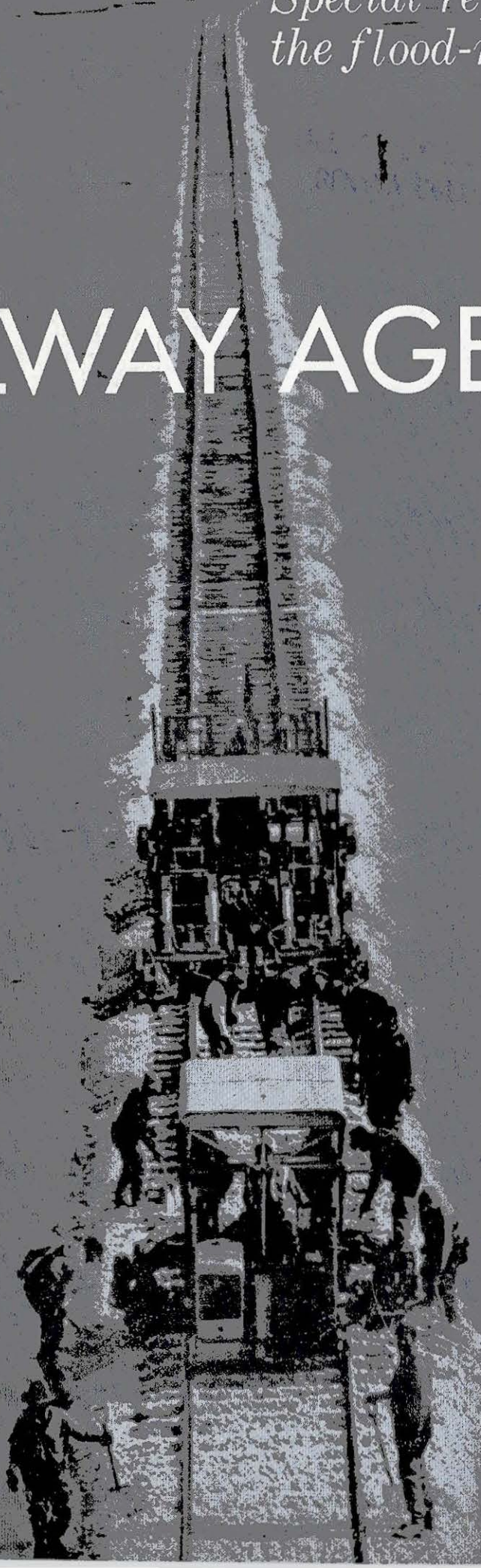
Special report from the flood-ravaged Midwest

May 3, 1965

RAILWAY AGE WEEKLY



IC's gamble to keep a line open

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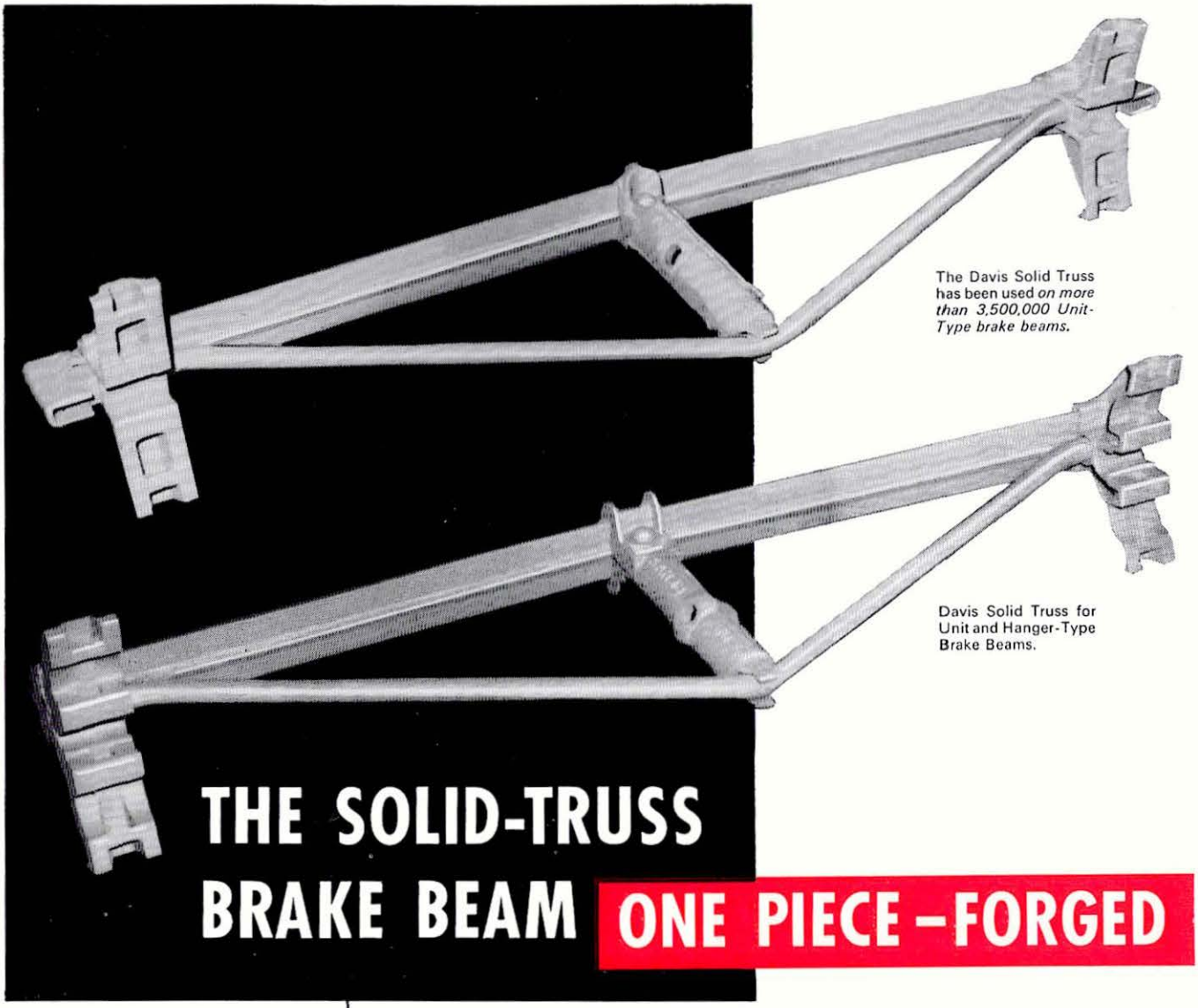

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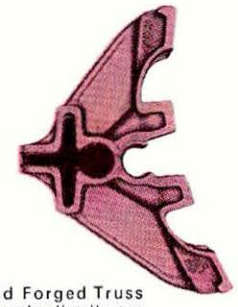

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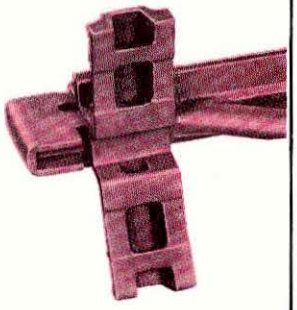

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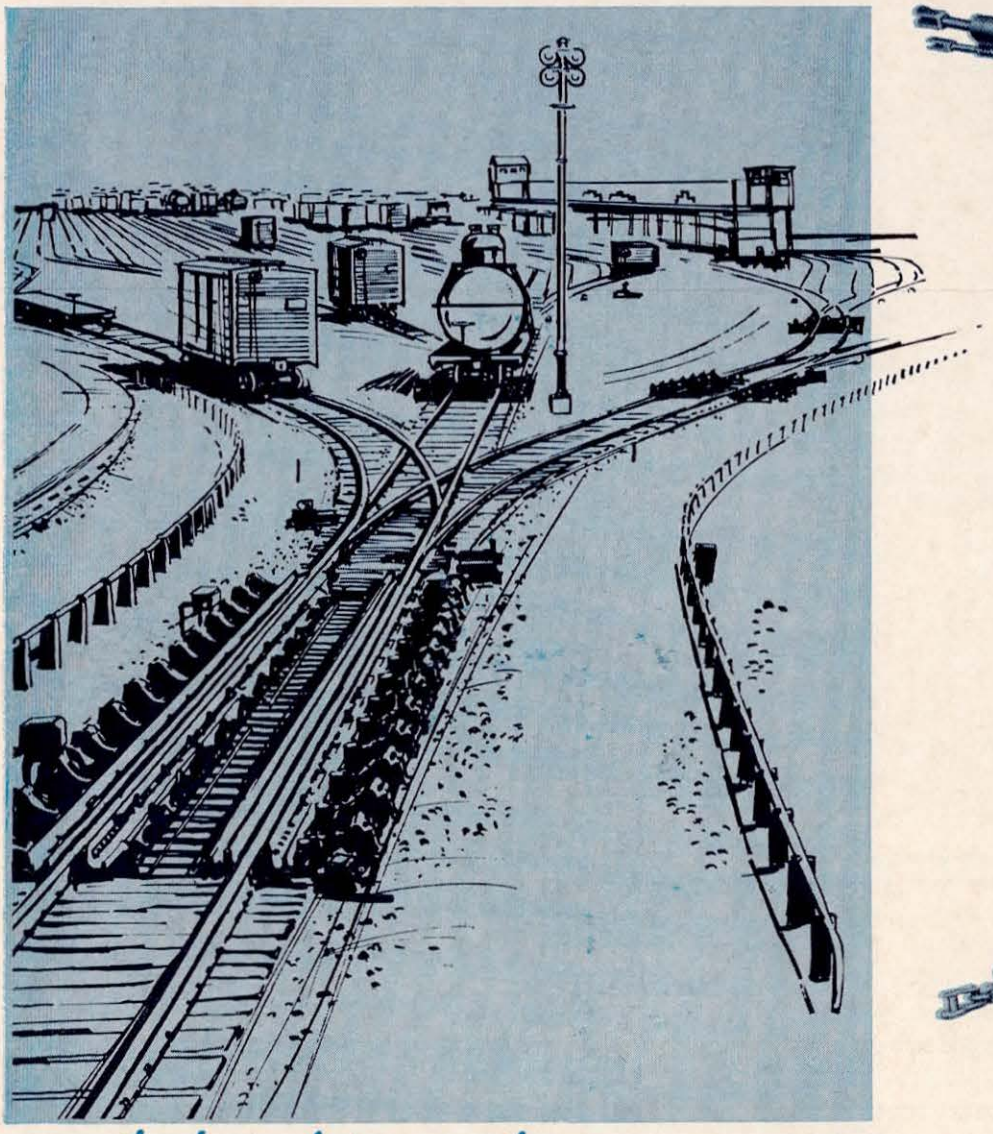

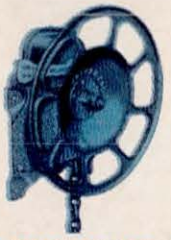

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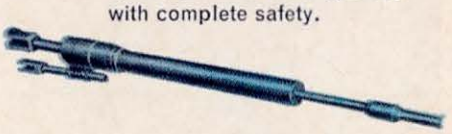

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RAILWAY AGE WEEK AT A GLANCE

May 3, 1965 • Vol. 158, No. 18

SPECIAL REPORT

IC's gamble at Dubuque

Fighting rising floodwaters to keep an east-west line open, workers wrote a heroic new chapter in IC's history. **p.18**

Disaster—but traffic moved

Despite widespread devastation, cooperation among midwestern roads kept traffic moving during the flood crisis. **p.22**

First-quarter profit dips

Unofficial estimates of net income for the first three months of this year show a 15% drop below '64. .....**p.11**

P&S Division set for Chicago session

Committee reports, addresses, and presentation of "Significant Achievement" awards will highlight the meeting. **p.17**

The Action Page—Why railroads must grow

Total traffic growth will bring volume that only the land-economizing railroads can handle. **p.50**

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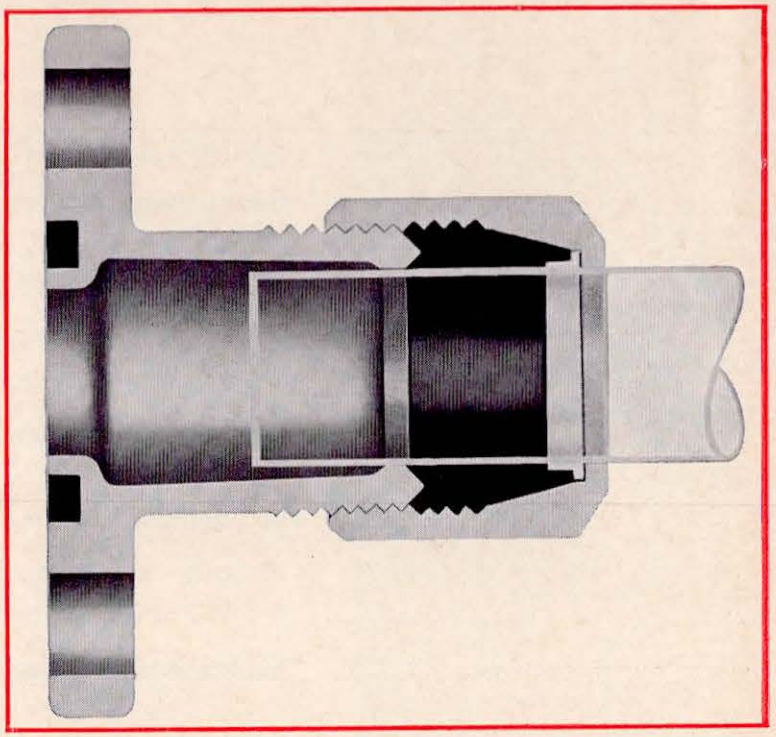
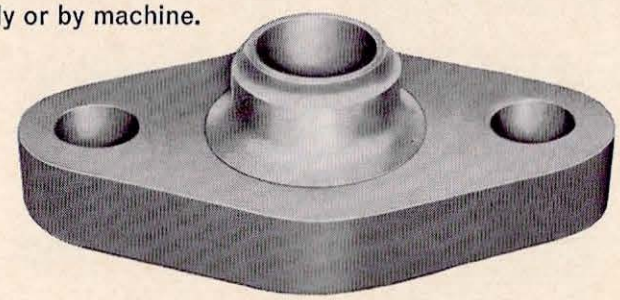
Now a choice in pipe fittings that eliminate air line leaks

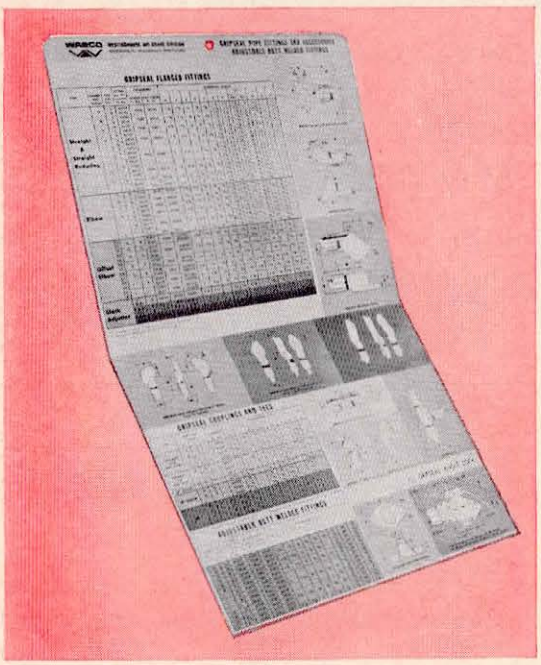
GRIPSEAL Flanged Pipe Fittings

stop air leaks and retain air pressure summer and winter. GRIPSEAL Fittings overcome the troublesome problem of connecting misaligned pipe or slightly short pipe. Even pipe broken at the threaded section can be sealed airtight with GRIPSEAL Fittings. They are interchangeable with WABCOTITE® Fittings and WABCOSEAL® Fittings. "White Mark" rubber compression rings won't stick to the nut—they remain leakproof even under extreme temperatures of —50 to +200°F. Selections of GRIPSEAL Flanged Pipe Fittings are available in pipe sizes from ½" to 2". Replacement compression rings are split so no dismantling of pipe is necessary. Just back off the nut, remove the old ring and insert a new one, and tighten again for a positive seal.



Adjustable Butt-Welded Fittings. Where welded fittings are preferred, the new Adjustable Butt-Welded Fittings provide many advantages: • Permanent pipe connections • Reduced number of joints • Source of leakage eliminated • Can be welded manually or by machine.





Send for new fittings chart. All GRIPSEAL and butt-welded fittings and accessories are listed by a color code for easy identification. Contact your Westinghouse Air Brake Division Representative or write to the address below.

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SHORT AND SIGNIFICANT

Boyd will be Commerce's transport undersecretary

"The Senate being willing," as President Johnson put it, the new undersecretary of commerce for transportation will be Alan Boyd, chairman of the Civil Aeronautics Board. The President said last week that he would nominate Boyd for the Commerce position. If confirmed by the Senate, as expected, he would succeed Clarence D. Martin. The President also announced that the new CAB chairman will be Charles S. Murphy, who has been undersecretary of agriculture.

●

Katy to get a new dress, says John Barriger

M-K-T's new boss, Chairman John W. Barriger, lost no time taking the measure of his new property. After a month-and-a-half inspection trip over every inch of the road, Barriger decided that Katy's very existence was threatened by deferred maintenance and failure to keep pace with industry investment in property and equipment, and promptly outlined an ambitious program to get Katy back on the track to profitability in five years. Barriger is pushing for financing needed to rehabilitate the road's track, shops and car fleets—and has already started reshaping the road's practices in operations, stores, accounting, maintenance of way and maintenance of equipment.

●

It's a stock car—no, it's a flat car

Burlington is getting set for an experiment which would make one basic car do two jobs, with nothing more than an off-on quick-change. CB&Q shops at Havelock, Neb., will build the test car—a basic flat car with a lift-off stock-car container body. During periods when livestock movements are heavy, the 53½-foot car would operate with its body (single or double deck) in place. At other times, the car would be available for such lading as lumber or agricultural implements. The box would be anchored to the car through the stake pockets.

●

Loss-and-damage payout up $10 million in 1964

First reported figures of railroad payout for loss-and-damage claims in 1964 (RA, March 29, p. 43) were on target almost to the dollar. The AAR's Freight Claim Division released figures April 26 showing that L&D payout for railroads reporting to the division came to $145,546,207, against $135,492,110 in 1963.

●

Santa Fe-Frisco studies move ahead

Merger studies started last November by the Santa Fe and Frisco are coming close to decision-making time. ATSF President E. S. Marsh says he expects near-future completion of the investigations—and "it may well be that if and when an agreement is reached with the Frisco, the occasion will call for a special stockholders' meeting."

●

ICC will be tougher about delaying cases

The ICC last week served notice of its intention to adopt a more restrictive policy on postponement of hearings and extensions of time for filing briefs and other pleadings. The notice said the Commission has been disturbed about delays which are expensive and inconvenient. Conflict of dates, or the press of other work, for example, will no longer be regarded as sufficient reasons for extensions of time.

MONDAY MORNING REPORT

A river went mad—and railroads fought back

The Federal Communications Commission might not have approved of every adjective that blistered walkie-talkies along the banks of the Mississippi this past couple of weeks. But then, the FCC wasn't working up to its armpits in the filthy waters of a mighty river gone mad. Railroad men were. And, while they'd laugh—or worse—if you applied the word "heroism" to what they did, there just aren't many other words that fit.

It was work, work—and keep right on working

In the early days of the flood, there were men who labored to remove the electronic mail-sorting equipment from St. Paul Union Depot before floodwaters rushed in. Later, downriver, there were many narrow escapes —Burlington employees, for example, who had to flee as water came crashing through a levee. And there should also be recognition of the dedication of men outside the immediate flood zone—men who suddenly found their divisions handling swollen traffic in intricate re-routings.

Quit? Not on your life

Railroads that parallel the angry Mississippi for any distance were dead—or in bad trouble—almost from the start of this record-smashing flood. Roads that faced the river's challenge at crossings had a little better chance. And, probably, nobody spit on the dice and threw them on a bigger gamble than Illinois Central. IC is a Midwest-to-the-South road, yes, but it's also one which operates on one of the most competitive of railroad routes, Chicago-Omaha. And it was on this line, at Dubuque, Iowa, that IC took on the rampaging river.

From defeat, a victory

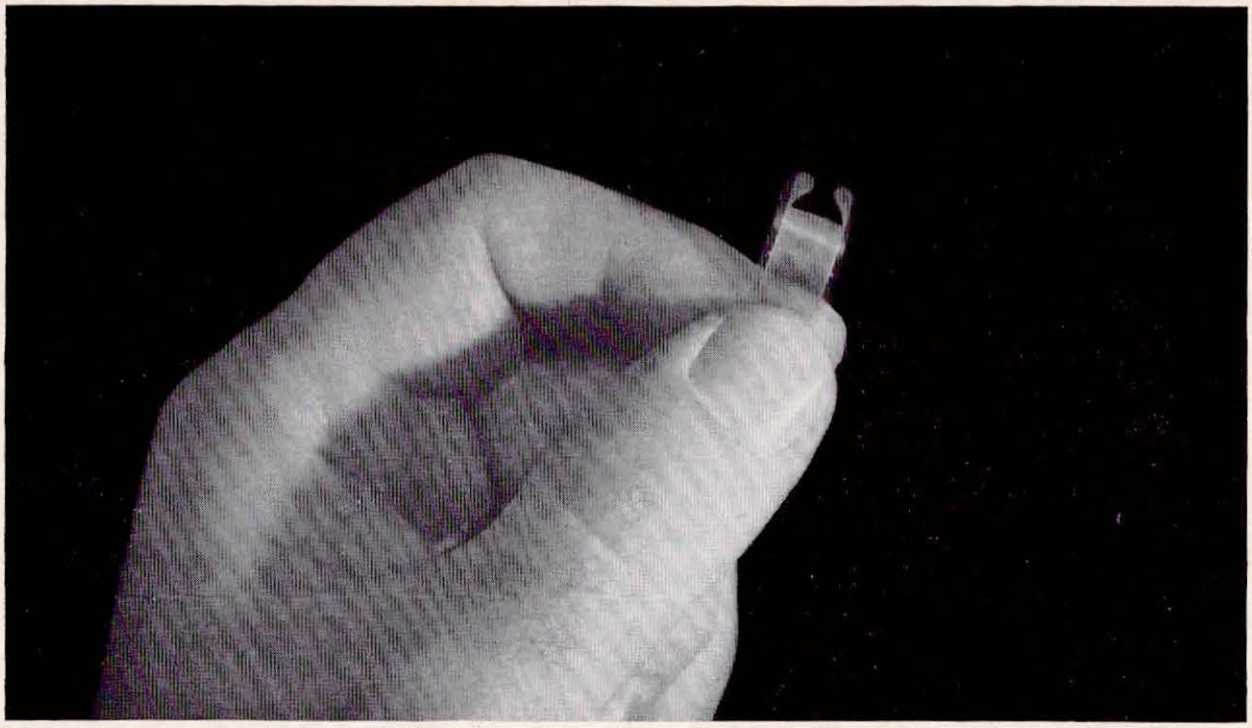
IC went into the gamble backing its engineering department with a blank check, machines and, most importantly, men. It came out with cancelled or bob-tailed train service, as did those roads that tried to button up against the river's rise instead of battling it right up to the last minute, the last inch. To the ordinary observer, IC lost—but it didn't. IC won and, because it did, so did the whole industry.

The chance IC took—what did it prove?

It's true that the Father of Waters administered a spanking. But it was only temporary. IC stayed in service after others were submerged; IC will be back in service, so its engineers say, well in advance of the others. Further, this road—and its men—did a job which (1) points up the vitality of a railroad and (2) could help put to rest the theory that railroad morale is shot. As to vitality: Can anybody, really, imagine any of the competing forms of transportation gambling its own money and manpower on such a battle? And as to morale: Sure, the men who waded chest-deep in the Mississippi are going to demand every cent of overtime they're entitled to (and they're entitled not only to that but also to the heartfelt thanks of the railroad). But, once again, railroad men (supervisors and working stiffs alike) demonstrated that there's something about a railroad, something about working for a railroad, that brings out the best.

A story to be spread . . .

There are countless stories that could be told, and they will be told—around the railroad and, hopefully, beyond its geographical confines. There was management's willingness to take the chance; there was the general chairman who came in and said "What can we do?" There were uncounted instances of individual initiative and devotion to the railroad. There were railroad men, fighting to save a railroad. They lost—but they also won.



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- TMU acts as an effective damper to slack action, gives better protection to lading.
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- TMU can make unit train operation more flexible, more attractive to customers.

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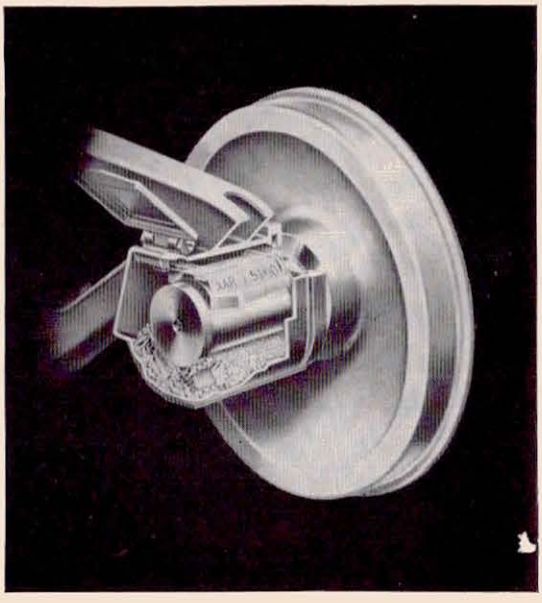

First-quarter profit dips

Wage increases, winter storms, dock strikes and other factors have made their mark on industry net income columns. Estimates are that the drop will be about 15% below '64.

The natural and man-made phenomena that have affected the nation's railroads over the past few months have also had their effect on many roads' first-quarter earnings.

Unofficial estimates are that the industry's first-quarter net income will be 15% below first-quarter '64—$120 million as compared with last year's $144 million. And this is despite the fact that ton-miles were up an estimated 6%.

Among the natural adversities blamed for taking a large bite out of many railroads' profits were disastrous floods in the Northwest and on the West Coast, and unusually heavy snowstorms in the northern part of the nation.

A big man-made dent in the income accounts was attributed to recent wage and fringe benefit increases for firemen and non-ops. The increases went into effect late last year, and although retroactive to Jan. 1, 1964, many roads did not spread the higher costs over the year but lumped them in the last quarter. Consequently, last year's first-quarter earnings did not reflect these wage increases. Therefore, the drop in 1965 first-quarter earnings, observers point out, is not as drastic as it might first appear.

Two other factors also affected railroad profit columns: the 36-day longshoremen's strike on the East and Gulf Coasts; and, in comparison with '64's first quarter, the lack of big export grain movements.

● **Things looking up in the East.** Despite the setbacks, the two largest railroads in the East registered gains in their first-quarter net income. Pennsylvania Railroad had consolidated earnings of $11.7 million—up from $9.5 million for the first quarter last year. New York Central showed a profit of $1.5 million this year, as compared to slightly more than $1 million in 1964.

Both railroads reported that the dock strike and the wage increases for employees affected their income.

Two eastern railroads that have been plagued by financial troubles managed to show some impressive improvement in 1965's first quarter. The Reading cut its 1964 first-quarter deficit of $2.6 million to $607,000 for this year's first quarter. Erie Lackawanna reduced its first-quarter losses to $1.5 million from $3.2 million last year.

On the down side, Chesapeake & Ohio, had net income for the three months of slightly over $8 million, a drop from the $8.6 million for the corresponding period last year.

● **Returns from the Midwest.** Illinois Central had a slight rise in income for the first quarter. IC earned $3,610,948 for the first three months, up from $3,592,189 in the first quarter last year.

The Chicago & North Western pulled a profitable switch in the first quarter, ending up with a net income of $42,947, compared to a loss of $347,825 last year.

Higher wage costs and the longshoremen's strike on the Gulf ports affected Missouri Pacific first-quarter income. The net was $6 million, down from 1964's $6.3 million.

● **Downtrend in the West.** Great Northern's net income for the first three months was down nearly $5 million from last year. In first-quarter 1964 GN had some unusually large export wheat shipments that did not recur this year. President John M. Budd said this year's drop was also due to increased operating expenses and costs of snow and ice removal. The first-quarter tally: $2.1 million, compared to $7.1 million last year.

Northern Pacific's net went down $1.2 million from last year to $3.3 million. NP also attributed the higher 1964 income to the grain moves.

A substantial drop in net income was experienced by Soo Line. The railroad earned $397,121 in the first three months of this year, compared to $2.2 million in 1964.

In the far west, Union Pacific was still going over its books, but expected to show a slight increase for the first quarter. Earnings last year were $18.3 million.

Net income for the Western Pacific was up 33.6%, going over $1 million.

● **Good business in the South.** Louisville & Nashville registered a healthy jump in net income—$2.7 million, up from $1.9 million last year.

The Seaboard also had a good three-month period. Its net income was nearly $4 million, up from $3.9 in 1964. ■

WATCHING WASHINGTON WITH WALTER TAFT

TAFT

• **RECENT ICC DECISIONS** in competitive-rate cases have been interpreted by Commissioner Howard G. Freas as rulings which may have brought into question the merits of going forward with the Commission's cost-evidence case. That's the No. 34013 proceeding. The Commission instituted it three years ago to propose adoption as its own of cost formulas developed by the Cost Finding Section of its Bureau of Accounts.

The formulas involved include Rail Form A and Rail Terminal Form F, which are used to develop freight-service costs. Similar formulas designed to develop trucker and water-carrier costs are also involved. The Commission's proposal contemplates that the formulas would be accepted in competitive-rate cases as *prima facie* evidence of the facts which they purport to establish.

THE COMMISSION'S HOPE, when it launched that case, was to improve the quality and reduce the quantity of cost evidence, meanwhile eliminating controversy about admissability of cost evidence and shortening cross-examination on methods used in preparing cost studies. The proposal is opposed by the railroads as a threat to the freedom carriers now have to tailor cost evidence to differing operating conditions.

THE FREAS SUGGESTION that the rug may have been pulled from under the case came in his dissent to one of the recent series of Commission decisions clearing rates below out-of-pocket costs as calculated by the Cost Section's formulas. The case was I&S No. M-17995 in which the Commission cleared a back-haul truck rate on aluminum extrusions moving from Miami to Chicago. Some southern railroads were among the protestants.

THIS DECISION, embodied in a report by Commissioner Paul J. Tierney, noted that the Commission has frequently considered the compensativeness of back-haul rates in light of the availability of space in vehicles which would otherwise move empty. The effective competition was identified as private carriage, and the report said common carriers should be encouraged to explore every lawful means to prevent diversion of their traffic as well as to attract additional traffic from unregulated competition.

THE FREAS DISSENT complained that this and other recent decisions (to which he also dissented) "appear to reduce costing to the whim of the moment." Previous cases which Freas had in mind included two recent ones wherein the Commission (over his protest) condoned rates on the added-traffic basis for the first time in situations involving competition between regulated carriers (RA, Mar. 29, p. 12).

FREAS ALSO QUESTIONED the "great weight" which the majority attached to private carriage as the competition—because "rail protestants, a regulated mode, now have a lower competitive rate in effect." Another dissent came from Commissioner Abe McGregor Goff. He found no evidence showing that the cleared rate was compensatory "by established and accepted cost procedures."

A CONCURRING OPINION came from Commissioner Rupert L. Murphy, who was a dissenter in the other recent cases cited by Freas. Murphy went along with the majority this time because he thought the protesting regulated carriers had failed to show that they would be hurt—so benefits of the approved rate "are to be enjoyed by a regulated carrier at the expense of unregulated carriage."

No-strike plan for Bay Area

San Francisco is doing its best to make sure construction of the Bay Area Rapid Transit system isn't held up by such things as strikes or lockouts.

After more than a year of negotiations, safeguards against work stoppages have been set up, to last during the six-year life of the construction project. Negotiations involved transit-district representatives and unions affiliated with 19 international labor organizations. The agreement itself is between the district, its Joint Venture engineering consultants and about 90 individual unions. Individual contractors will also be invited to sign the pact.

• **Only two exceptions.** Although the agreement also sets up procedures for grievances and arbitration, the no-strike, no-lockout arrangement is considered the most significant provision. By terms of the pact, strikes would be possible under only two conditions—if bargaining agreements between unions and contractors are not successfully renegotiated after expiration; or if an employer fails to pay fringe benefits or live up to hiring provisions.

Most agreements in the construction industry are now due for negotiation—and resulting agreements are expected to run for three years, or about half of the construction period.

If there should be a work stoppage, the agreement provides that unions, employers, the district and the consultants will "spare no effort" to get the problem settled and work resumed.

• **Committee set up.** The pact also sets up a permanent Project Labor Relations Committee to consider specific problems which may develop. Aim of the committee will be to achieve "prompt, peaceful and mutually satisfactory solutions and otherwise promote harmonious labor relations on the BART project."

F. W. Monrean, Joint Venture labor-relations supervisor, called the agreement "the first of its kind in U.S. labor history. It will probably create a pattern of similar agreements on large rapid-transit developments throughout the country."

At the heart of the pact is agreement, all-around, that succesful completion of the 75-mile system is of the "utmost importance to the general public." ■

45 ton depressed center car

250 ton depressed center car

70 ton depressed center car

250 ton depressed center car

90 ton depressed center car

346½ ton depressed center well car

125 ton depressed center car

135 ton flat car

125 ton depressed center car

200 ton flat car

140 ton depressed center car

250 ton flat car

150 ton depressed center car

250 ton flat car

160 ton depressed center car

300 ton flat car

170 ton depressed center car

96 ton well car

200 ton depressed center car

125 ton well car

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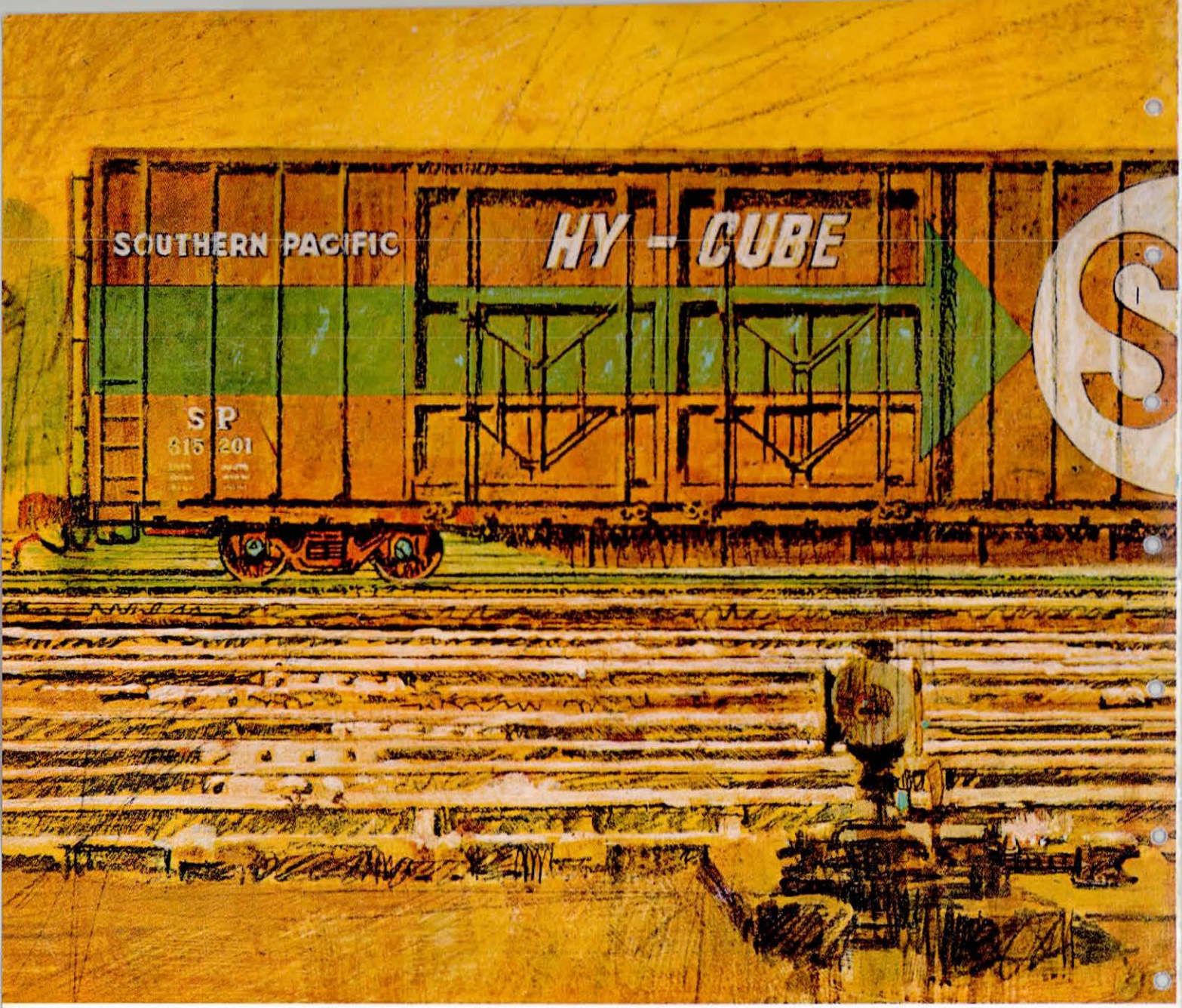


,785 22,786 Now Southern Pacific rolls 22,787

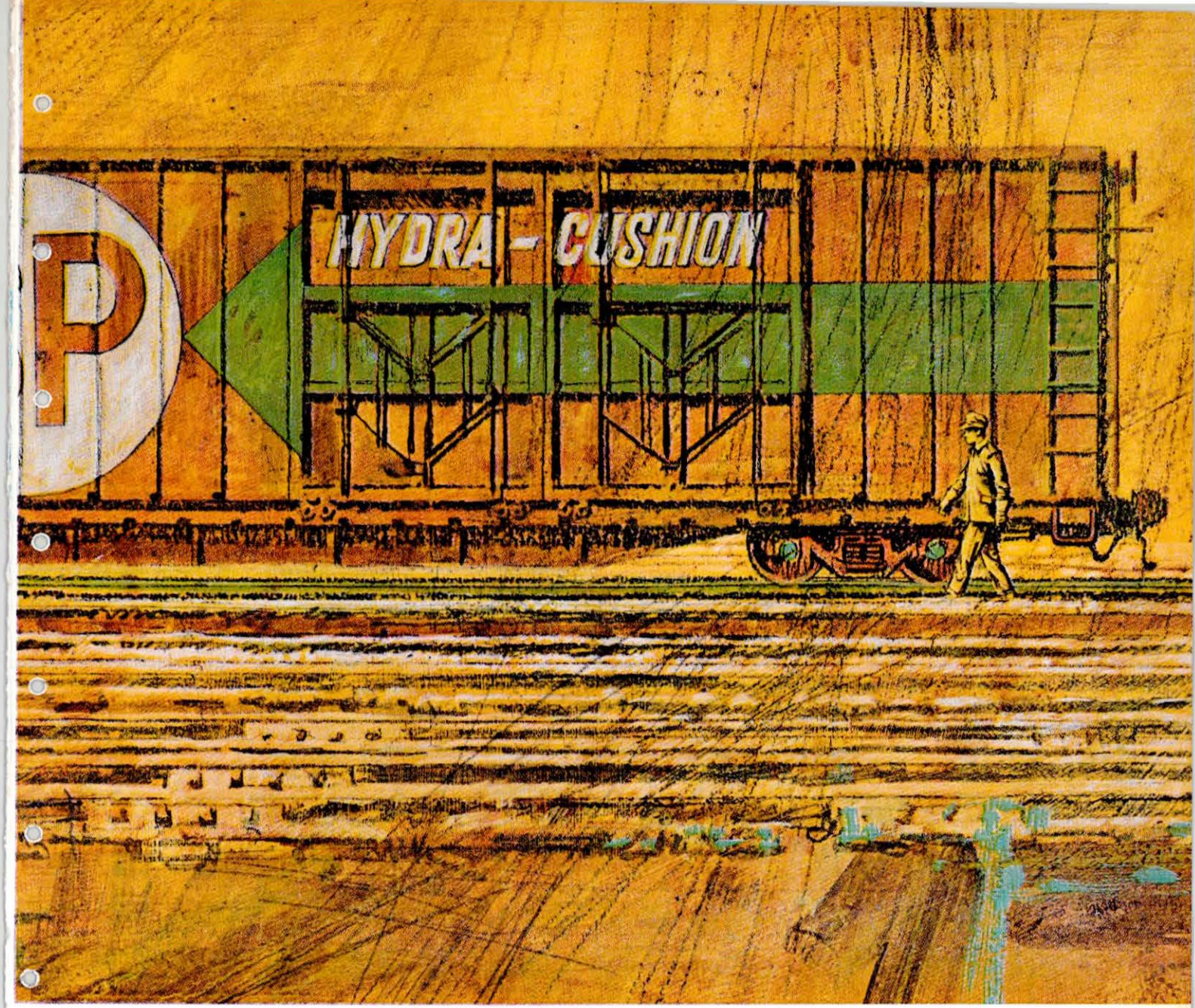
This is one of Southern Pacific's new 89-foot mammoth freight cars. Southern Pacific now has 160 of these 10,000 cubic-foot giants on the rails. Many are equipped with Timken® "AP" tapered roller bearings. They join a rapidly growing fleet of 28,446 Southern Pacific roller bearing freight cars already in service, or on order, including Cotton Belt and Pacific Fruit Express cars (Pacific Fruit Express is jointly owned by S.P. and U.P.).

These 28,446 roller bearing freight cars make Southern Pacific one of the largest "Roller Freight" railroads in the world.

What does this mean to Southern Pacific?

This means diminished maintenance costs, lubricant costs, inspection time. It means the virtual elimination of the hot box problem for roller bearing cars.

Statistically, Timken bearings average over 100 times the performance of ordinary friction bearings. They're precision-made of nickel-rich steel for



freight cars on roller bearings 22,788 22,789

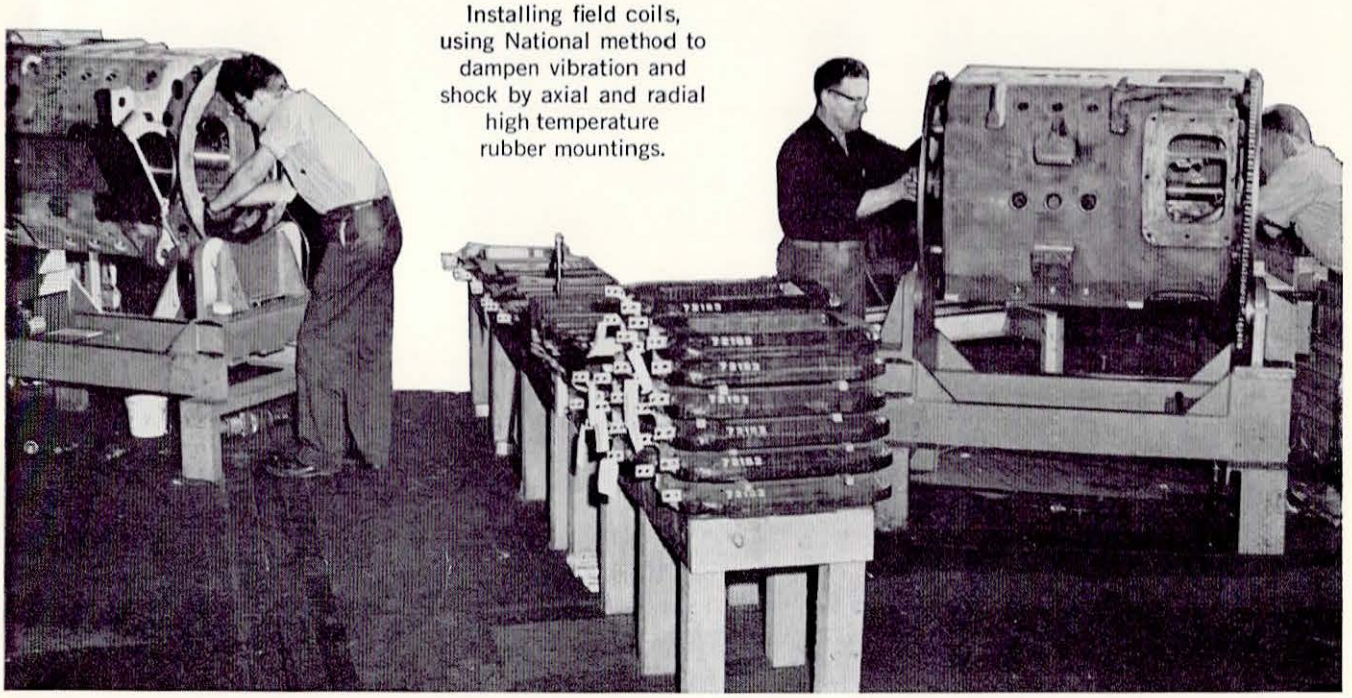
uniformly high quality, long life, resistance to radial and thrust loads. They're tapered because we learned 66 years ago that's the best way to design a roller bearing for big jobs.

Next time you order new freight cars—whatever their size, shape or price—give us a chance to prove our case for "Roller Freight". There are now over 190,000 freight cars in service or on order on Timken "AP" bearings. They're owned by 154 railroads and private car lines. The Timken Roller Bearing Company, Canton, Ohio. Also makers of Fine Alloy Steel and Removable Rock Bits.

QUALITY TURNS ON HEAVY DUTY

TIMKEN®
TAPERED ROLLER
BEARINGS

National main and interpole field coils manufactured and reinsulated to close tolerances to insure trouble-free service



Installing field coils, using National method to dampen vibration and shock by axial and radial high temperature rubber mountings.

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For your convenience, National maintains stocks of coils, unit exchange traction motors, generators, and armatures at Columbus, Ohio and Bluefield, West Virginia.

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P&S Division set for Chicago session

Elections, awards presentations and numerous reports are on the agenda of the 37th convention of Purchases and Stores.

Between a thousand and 1,200 railroad and railway supply company officials will converge on Chicago this week for the 37th convention of the Association of American Railroads' Purchases and Stores Division, being held at the Palmer House May 5, 6 and 7.

Highlights of the three-day meeting will include:

—Reports of the division's general committee and its eight active subject-area committees;

—Election of P&S Division officers for the coming year;

—Presentations of awards to the top three prize-winning entrants in the Division's 1965 essay contest;

—Addresses by Gregg W. Maxwell, senior vice president of the Erie Lackawanna; J. Lewis Powell of Alexandria, Va., and Winston K. Pendleton of Washington, D.C.;

—The P&S Division annual dinner.

● **Who'll be No. 2?** The election of W. H. Rose, general purchasing agent of the Seaboard Air Line, to succeed outgoing P&S Division Chairman C. F. Bayer, vice president of P&S, Erie Lackawanna, for the coming two-and-a-half years is pretty much of a foregone conclusion, since division custom dictates that the current vice chairman —Rose—succeed to the top spot. Greater interest this year will attend the nomination for vice chairman.

● **Award presentations.** Philip F. Van Pelt, P&S editor of Railway Age and editor of Railway Purchases and Stores, will present three "Significant Achievement" awards on Thursday morning, May 6, to the winners of the P&S Division's 1965 essay contest.

The winners, who also will receive prizes of U.S. Savings Bonds from the division, are: first prize, William C. Hartman, chief clerk, purchasing department, Erie Lackawanna, Cleveland; second prize, George B. Walker, treatment inspector, treatment plant, Illinois Central, Grenada, Miss.; and third prize, Walter A. Fussner, Jr., material analyst, Missouri Pacific, St. Louis.

The "Significant Achievement" awards, instituted this year by Railway Purchases and Stores, each consists of a polished-walnut plaque.

Winners of the P&S essay contest will get a plaque, above, and a savings bond.

● **Reports of committees.** Leading features of the report of the P&S Division general committee—as released prior to the meeting and therefore subject to change—include:

—An accounting of the various subject-area committees and the meetings which they have held since the last P&S Division annual meeting in October 1963;

—Reports as to the constitution and progress of work of the division's executive, nominating, steering, essay, and index-and-interchange-price committees and the committee on committees;

—A report on the ABC method of purchasing and inventory control and on revision of the division's Standard Material Classification by a special subject committee;

—Names of persons appointed to vacancies created by the retirement or death of previous members of the general committee;

—Report on a proposed revision of AAR Interchange Rule No. 122 and Per Diem Rule No. 8, relating to the furnishing of materials for repair of owner's defects on cars on foreign lines;

—A tentative recommendation that the subject of a nationwide P&S disaster-recovery plan, as mentioned in the division's 1963 annual report, be dropped in favor of regional plans.

Principal recommendations of the P&S Division's eight subject committees as contained in the groups' tentative reports, are as follows:

● **Training.** A newsletter to report on what various railroads are doing to train their P&S personnel should be issued periodically by Committee 1-B P&S Training, the committee recommends in its 1965 annual report. Other recommendations of the committee include continuation of the group's present custom of presenting a 15-minute paper at each regional group meeting on the advantages of a P&S training program; reporting by each regional group on at least one outstanding example of purchasing training programs drawn from industries other than the railroad industry, and the development and reporting of a suggested general aptitude-testing program for P&S personnel.

● **Warehousing.** Current studies by Committee 2H P&S Warehousing of the relative advantages of less-than-carload and less-than-truckload shipments should be continued, the committee recommends. The committee, headed by K. E. Painter, assistant general storekeeper, Southern Pacific, Sacramento, Calif., also recommends that its present studies of efforts to eliminate the rule requiring branding of air-brake hose with the name of the purchasing road and of demurrage charges on oxygen and acetylene tanks be continued into the coming year.

● **Inventory control.** The "Data-Phone" system of ordering materials, including complete details of the operation of and the advantages or disadvantages of the application of such a system should be investigated by the P&S Division Committee 2J-Inventory Control, the committee recommends in its report.

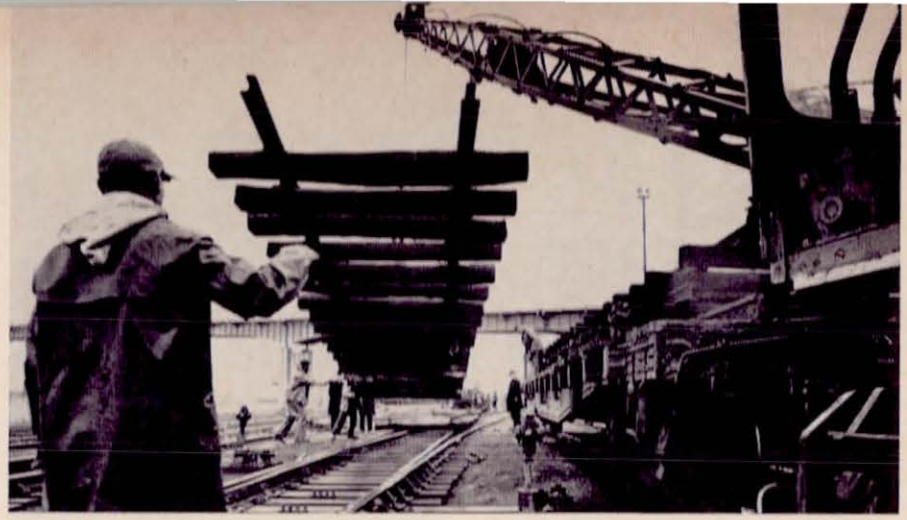
To be presented at the P&S Division meeting by Committee Chairman J. E. Josephs, traveling storekeeper, Gulf, Mobile & Ohio, the committee's report also recommends that the committee in the coming year investigate and report on a standard inventory control system practical for use in production control of the materials used in large carbuilding, rebuilding or major repair work in railroad shops, and that it investigate and report on any new methods of disposing of obsolete or surplus material.

● **Data processing.** Continuation of committee studies of systems and procedures for data processing concerning P&S functions supplementary to and compatible with accounting procedures is recommended in the annual report of P&S Committee 3A&B Data Process-

(Continued on page 34)

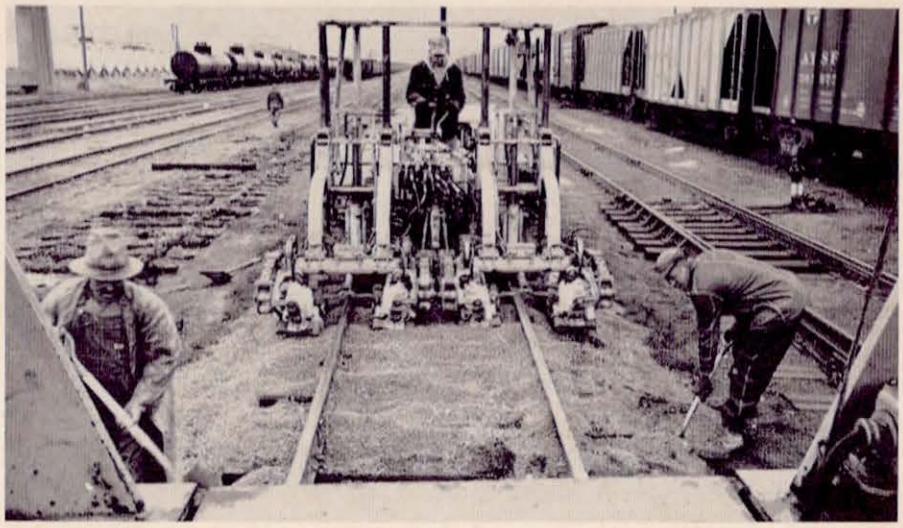
April 15

Desperately trying to keep one line above water, IC crews move panels of track to top newly-ballasted track, left.



April 16

Working 'round the clock to stay ahead of the flood waters, railroad crews drop another section of track into place over the threatened line, southeast of Dubuque.



April 17

With flood waters on the way, a tamper hurriedly works on new applications of ballast to raise track level. IC hoped to beat a predicted crest of 24 feet, and by April 19 the battle seemed won.

SPECIAL REPORT

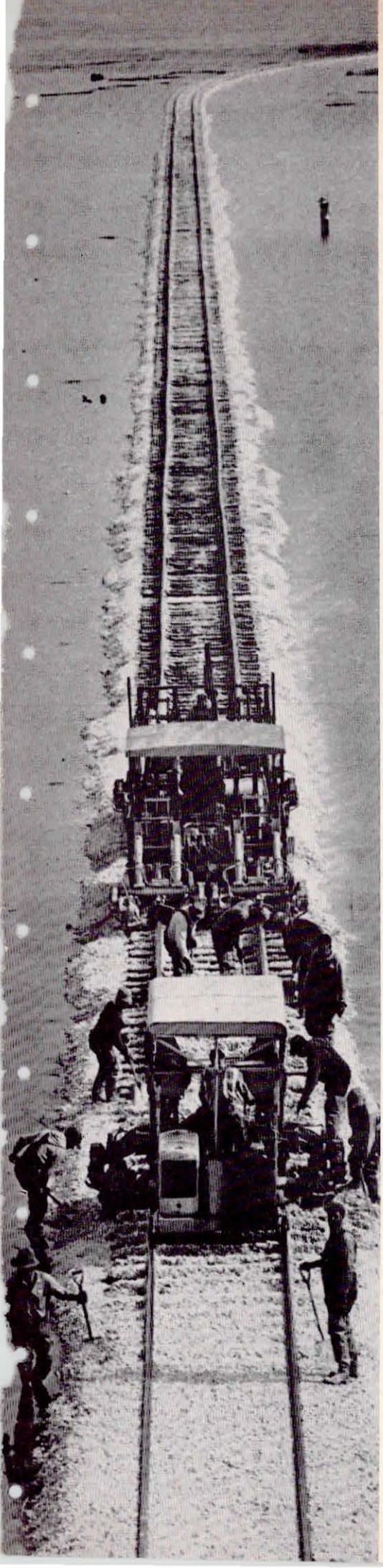
IC's gamble at Dubuque

As flood waters rose, Illinois Central gambled boldly to keep an east-west line open. The Mississippi took the final round—but IC's tireless, dedicated engineering forces won the big victory.

At 8:14 p.m., April 22, at Dubuque, Iowa, Illinois Central dispatch freight CAC-5's four diesels began inching forward into what looked like a tranquil lake. The train, with 92 cars destined for interchange with the Union Pacific at Council Bluffs, slowly rolled over about a mile-and-a-half of track that was several inches under water—preceded by a boat. The men in the boat watched the water ahead of the train for floating debris. Safely over the submerged track, CAC-5's diesels roared and the train picked up speed as it headed west. It was the last train through "Lake Dubuque" before the floodwaters closed the line—five days after other lines in the area were knocked out.

It was the end of a two-week effort by IC men to keep an east-west line open through the flood-stricken area

• **The fight begins.** IC's race with the rising river began April 12, when Division Superintendent John Dodge went to railroad headquarters in Chicago with estimates from the Army Engineers predicting a 24-foot crest at Dubuque on April 25. Flood-level for the Mississippi at Dubuque was at 17 feet. IC's lowest line was about a mile-and-a-half of track just across the Mississippi, on the Iowa side, where the

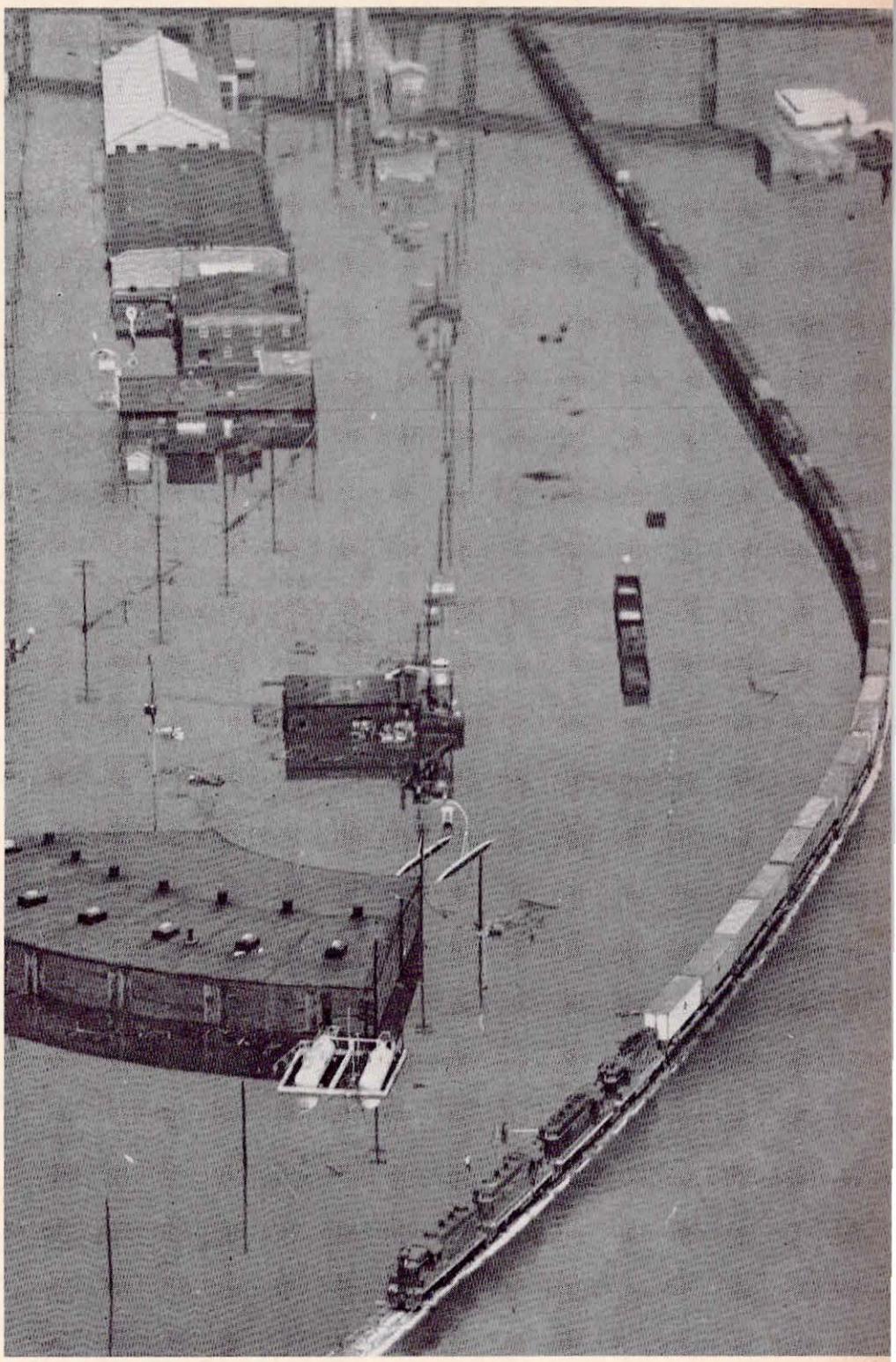


April 21

The waters come, and only the raised track is visible above the flooded rail yard. Other tracks are under four feet of water. New crest prediction: 26 feet.

April 22

As rising flood waters lap at the tracks, an IC freight does a 10-mph tight-rope run through the Dubuque yard. Flood finally crested at 26.7 feet.



THE FLOOD WINS OUT—TEMPORARILY

Illinois Central's 'Land O' Corn' was one of the last trains to use the line before flood waters washed over the tracks and put the route out of service. IC's herculean efforts paid off, cut disruption of service by an estimated 10 days.

line had an elevation of 21 feet. IC Operating Vice President O. H. Zimmerman and Chief Engineer Alan Sams huddled with Dodge and decided upon a plan to keep a line operating through Dubuque. In essence, they decided to raise the low track four feet.

Orders began flowing out of the road's engineering department assembling men, machinery and supplies at the threatened point. By April 15, trains with hundreds of cars of crushed rock ballast were arriving in Dubuque and the railroad began to defend itself.

● **Work trains move in.** Engineers made panel sections of track by unbolting joints in an adjoining track to the track they were going to elevate, then pounding the rails to make parallel-jointed sections. They then placed the panels on top of the track they were going to elevate. Work trains poured ballast on the track. A gang with jacks and tampers followed the work train, raising the track eight inches for every pass.

By April 19, IC's engineers thought they had beaten the river—only to get word from the Army Corps of Engineers that the crest would be 25 feet. IC's engineering forces and crews took a deep breath and redoubled their efforts. By April 21 they had raised the line to where it would have withstood a 25-foot crest, only to have the Army Engineers again revise the flood crest upward, this time to 26 feet.

By Thursday, April 22, IC's weary maintenance-of-way forces, reinforced by an extra gang from IC's Illinois Division, were still working to keep the line open—but the road's engineering officers knew they had lost to the river: The Army Engineers put out a final crest forecast at 26.5 feet.

● **The Mississippi wins.** The river was already running over the line late Thursday night as IC's men—many of whose homes were hopelessly flooded—stumbled off to find a dry place to sleep. The river finally crested April 25, at 26.7 ft.

But, even as the river was cresting, IC engineers, refreshed by some sleep after their two-week race with the rising river, were out patrolling the track in boats. The new line had held, and there had been no washing away of the new roadbed, despite the current. "We plan to have our main line back in operation April 29 or 30," said the trainmaster at Dubuque, Jim Law.

● **Line not damaged.** IC's engineers put cranes into the line, patching low spots by spreading ballast, as soon as the water subsided a few inches. Crews were repairing the line while it was still under six inches of water. Adjoining tracks in Dubuque Yard, said Law, should be back in operation by May 9.

The net result to IC of the dedicated effort made by its Iowa Division men was considerable—despite the fact that the river did cut the line. The railroad was able to serve its shippers five days longer before the crest hit (the line would have been knocked out April 17 if they hadn't started raising the track) and get back into operation about four days afterward. IC's line was knocked out four days instead of two weeks. It made quite a difference to the flooded area—and to IC's shippers. ■

Dubuque in April '65: A time to remember

I'll not soon forget what it was like in flooded Dubuque, Iowa, late last month.

It had the look of a war area. Sandbag barricades were everywhere. Army amphibious tanks churned through water up to the top of their treads, carrying men and supplies through streets toward points where river pressure on levees threatened the city with further inundation. Army trucks—with motors high above the water—hauled out trailers from water too deep for ordinary truck tractors. A produce wholesaler who looked uncannily like Barry Goldwater supervised the removal of his stock as water spilled into the door of his warehouse. Next door, a sandbagged saloon named "Noah's Ark" provoked laughter from flood workers as they tied up boats to parking meters in front.

• **GHQ in the 'lake.'** A block down the street and around the corner, standing in the middle of what an IC wag tagged "Lake Dubuque," stood the railroad's flood headquarters, the freight office. There, connected with IC's feverishly working engineering forces and work trains by walkie-talkie radios, were IC's Iowa Division Superintendent John Dodge, Dubuque Trainmaster Jim Law and other division officers.

When Jim Law came to get me (in front of Noah's Ark Saloon) in a boat, there were booted IC electricians wading out, carrying long poles with floodlights attached—doing a difficult (and dangerous) job of moving the lights for that night's work. Trainmaster Law rowed us to the freight office where we joined Superintendent Dodge in a second-story office. He was intently watching a work train dumping ballast on the line about 50 feet in front of the building—the only track above water in IC's Dubuque Yard.

• **Those vital radios.** IC's engineers were in constant touch by radio. Open water carried the sound of the walkie-talkie conversations everywhere. Charlie Weller, IC's engineer maintenance of way, and Herb Longhelt, assistant engineer maintenance of way, were with a work party about 100 yards behind the work train dumping ballast. There, two tampers and a jack splashed down the rock that had been dumped by the work train ahead. Herb Longhelt radioed Supt. Dodge, "We're getting about an eight-inch rise, but she's settling back a couple of inches." Supt. Dodge listened to the message that crackled out of the walkie-talkie he held. "Okay, Herb." Turning to me, he noted, "It'll settle another inch when a train goes over the line."

Later, after renting an outboard motor to use with an aluminum boat (which belonged to IC Special Agent Herb Krahn), Supt. Dodge invited me to go with him and Trainmaster Law to inspect the mile-and-a-half of line that IC's engineers were trying to lift above the flood.

We moved southward over what, a few days before, had been IC's passenger track into Dubuque. It was under four feet of water. We floated down toward the south end, where a second work train was dumping ballast. The work train, attended by section men scrambling in water often up to their armpits, moved slowly, the hoppers roaring as the crushed rock poured down, sending up white clouds of dust.

• **Waders in use.** One of the walkie-talkies in the boat crackled, "Supt. Dodge, can we get some waders for the men on 9067?" He reached for his radio in the bottom of the boat. "Hello—Herb—yes, our stores people have gotten some. Have the stores man meet them when they go after another cut of ballast cars."

Supt. Dodge suddenly pointed to a spot ahead of the work train where water boiled over the ball of the rail, then grabbed for his walkie-talkie microphone. "Hello, Herb, this is Dodge. I'm down in front of the roundhouse."

"I sure hope you're in a boat," laughed Herb Longhelt from his command post a couple of miles away.

"Sure am, Herb. There's water coming over the rail in a low spot about twenty yards long down here."

"OK, Mr. Dodge, we'll get it up."

Later, we went to the passenger station. It was sandbagged, and windows and doorways were lined to a point above the expected flood crest with polyethelene sheets kept in place with plywood. Supt. Dodge shouted, "Charley, are you in there?"

• **'Just a little water.'** Water Repairman Pete Charley poked his head above the sandbags piled in front of the entrance. "Hi, Mr. Dodge. We got no water in here—just a little water on the floor of the agent's office. I just started the second pump a while ago."

A few moments later, a roar filled the air. Down the track a few hundred yards, one of the work trains had stopped to shake out its empty hoppers.

Trainmaster Law squinted, trying to see through the cloud of ballast dust. "There's rock on the track, Mr. Dodge." He talked into his walkie-talkie microphone, "9067, this is Trainmaster Law. You've got rock on the rail between the third and fourth cars and the sixth and seventh cars from your caboose."

"Yes sir, Mr. Law, we'll get it out," replied the work train's conductor. A few moments later two section men began wading forward from the caboose to clear the track.

• **Then more trouble.** Eventually we worked our way down to the south end of the track, where the elevation of the track began to lift it out of the flooded area. IC's Iowa Division Engineer R. B. Birkett walked toward us, shaking his head. "We are getting a strong back-current going toward the channel," he told us.

It was, in short, unforgettable. IC's weary men made full use of the marvelous machines and communications capabilities that characterize up-to-date railroad operations. "I don't know what we'd have done without these walkie-talkies," was the way John Dodge expressed it when we climbed out of the boat after our tour.

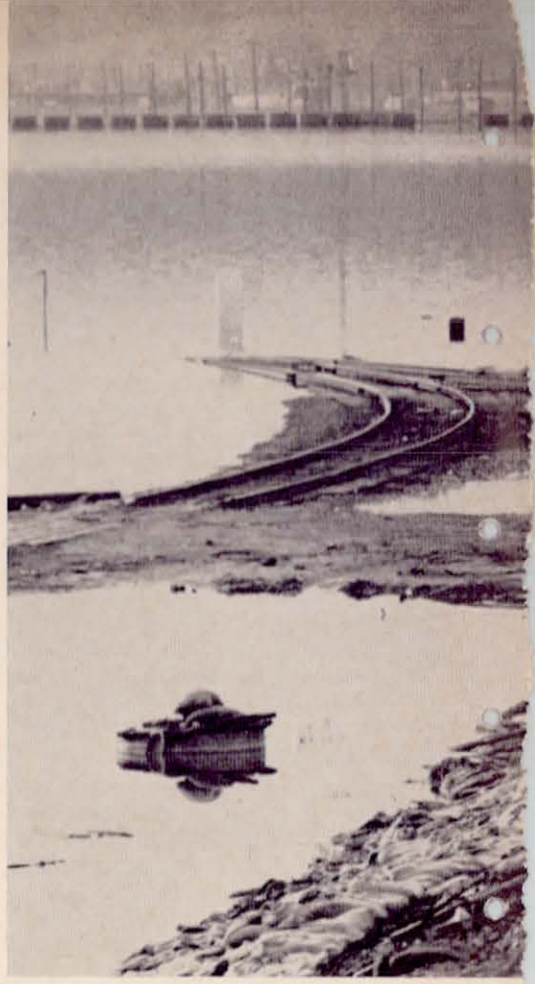
But, more than anything else, IC's men, workers and supervisors alike, were the sight I'll never forget. Many of them went without sleep for three days and three nights. There were men who could hardly walk, still carrying on, trying to keep their railroad open through the flooding area, drawn together by a common challenge. IC's men at Dubuque added a glittering page to railroad annals, despite the fact that their track was ultimately submerged by the majestic river in record flood.

It wasn't in vain. As Crane Operator James Rust said, "Our work ain't going down the river." IC stayed in operation five days longer and will be back in operation 10 days sooner than it would have without their efforts.

—John Mitros

NO ENTRY HERE

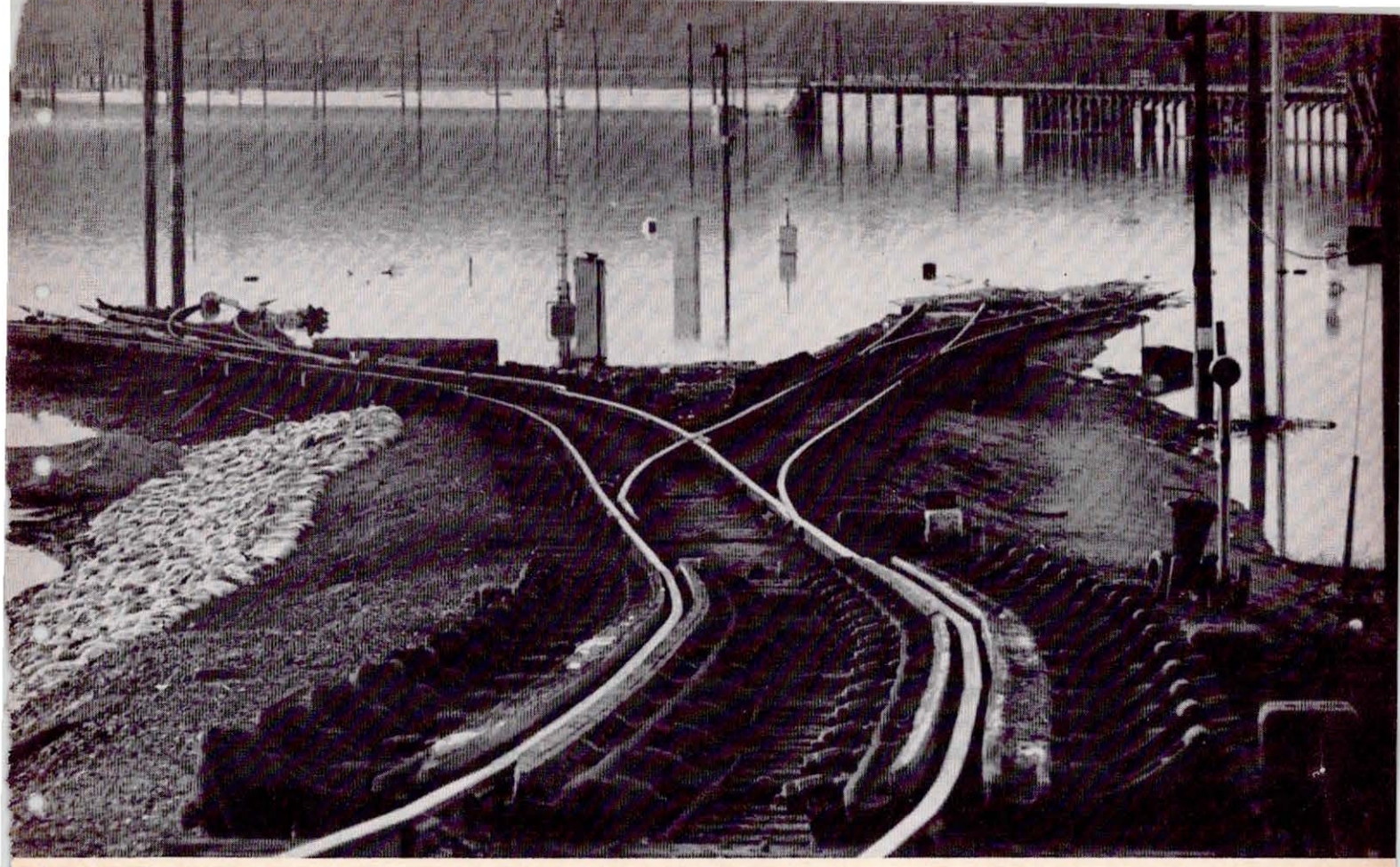
Flood waters cover the tracks at the entrance to Burlington's Dayton's Bluff Yard, southeast of St. Paul, Minn.



END OF THE LINE Tracks leading to

Disaster—but traffic moved

Railroads in the flood-ravaged Midwest were down—but not entirely out. Along with reports of widespread devastation came word that traffic was still moving, thanks to round-the-clock, interline cooperation.



the Milwaukee's Pig's Eye Yard near St. Paul disappear into a flood-created lake.

Flood news was all bad from the Midwest last week. Railroads crossing or running parallel to the upper Mississippi River got a devastating reminder in late April of the fact that man's spirit is about the only thing a flooding river can't wreck.

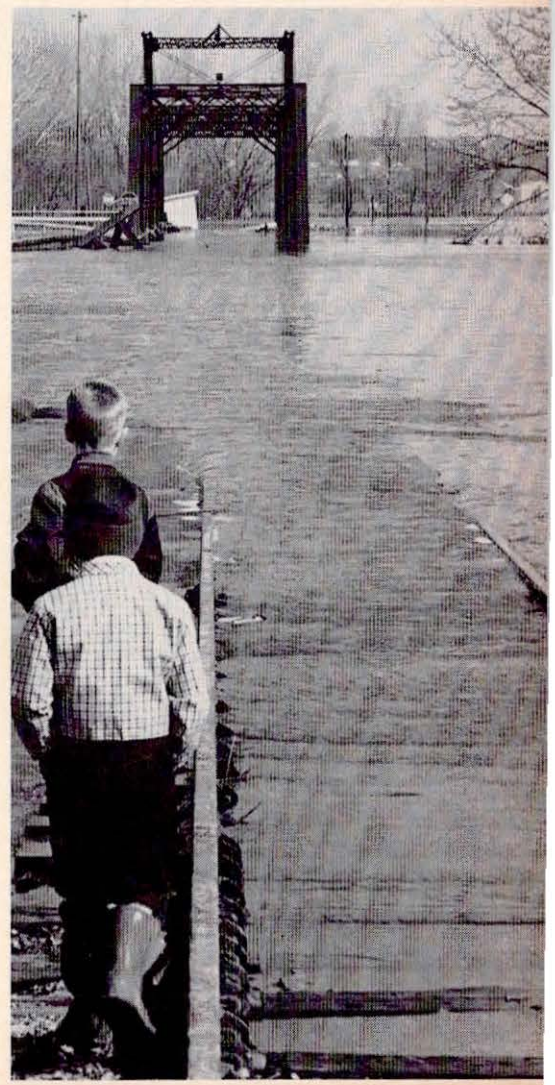
Nothing escaped the widening floodwaters. Highways, homes, industrial areas—and railroads—in hundreds of square miles along a 500-mile stretch of the upper Mississippi were abandoned to the rising waters. Railroad bridges, bridge approaches, lines, roundhouses, shops, yards, passenger stations and offices from northern Minnesota downriver to Quincy, Ill., and Hannibal, Mo., were severely damaged or completely knocked out.

● **Cooperation moves traffic.** All through the flooded area, cooperative agreements between railroads for rerouting privileges over each other's lines kept traffic moving surprisingly well. There were delays, but, as one railroad spokesman pointed out, "it is damned near miraculous the way we've been able to keep our traffic flowing despite flood and highwater everywhere. We've had delays to some traffic, but it's all getting through."

● **Loss runs to millions.** Damages to railroad facilities are hard to peg. Many railroads have not even been able to see lines still under water. Engineering forces, pushing maximum reconstruction efforts, have not stopped to even try to estimate damage to physical properties, but indications are that the flood bill will run to many millions of dollars to inundated railroads. Traffic officers glumly estimate that lost revenues will easily equal—or exceed—the damage.

Railroads reporting flood damage in late April included the Great Northern; Northern Pacific; Soo Line; Chicago, Burlington & Quincy; Illinois Central (see page 18); Chicago Great Western; Milwaukee; Rock Island; Minneapolis, Northfield & Southern; and others. The roads that apparently sustained the heaviest damage are the Milwaukee, CB&Q and IC.

● **Fast comeback.** But railroad men weren't knocked out of action by the river. Last week, from St. Paul down to Dubuque, Iowa, and Rockford, they

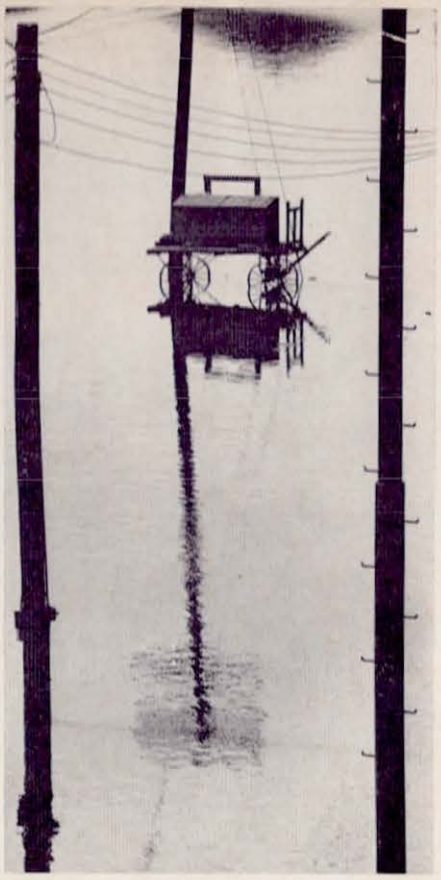


CUT OFF AT THE PASS

Two boys walk about as far as they can go on Minneapolis, Northfield & Southern line near Minneapolis. At flood crest, water was six feet over the rails.

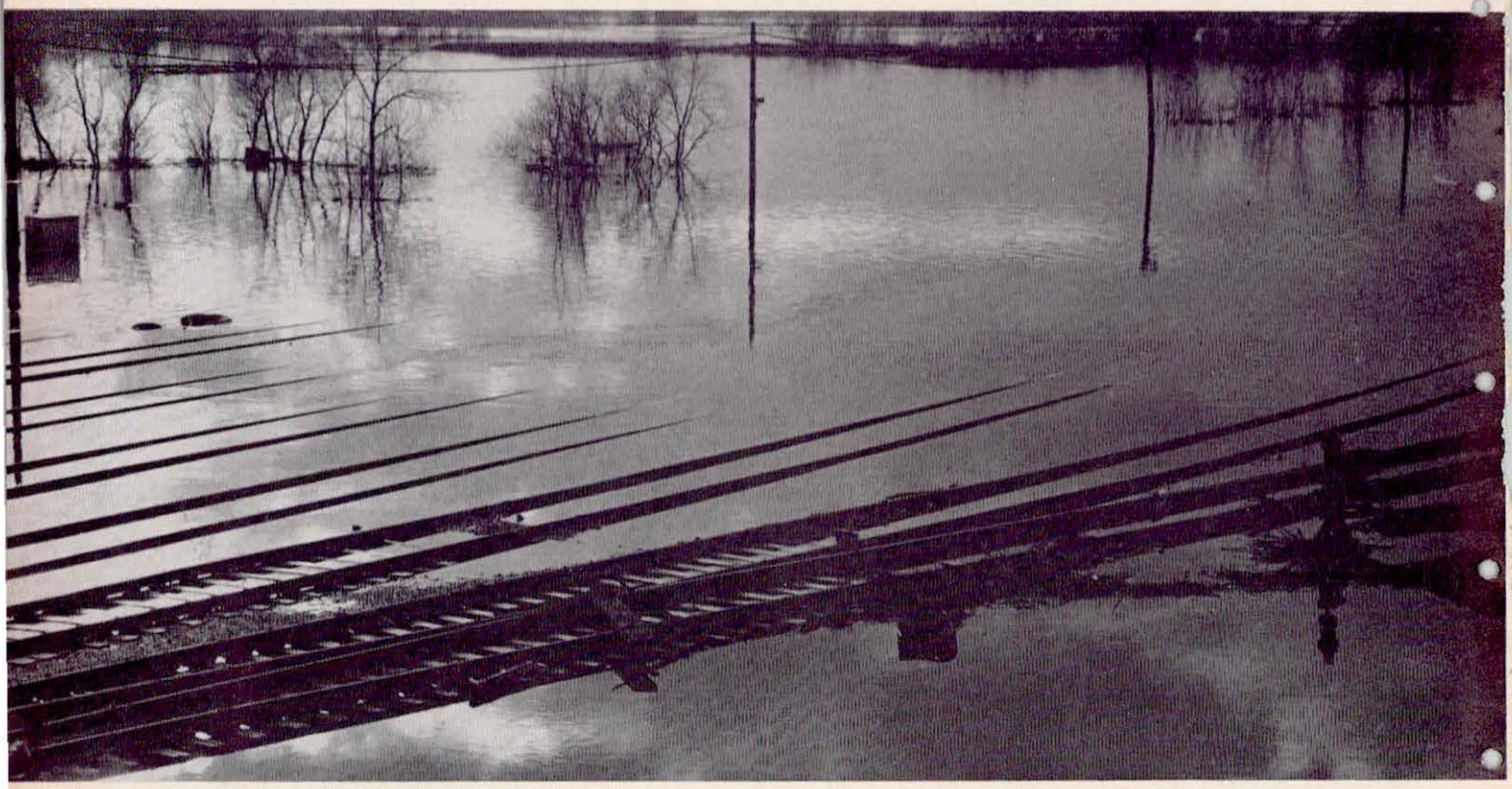
THE FLOOD AT ITS HEIGHT

Tracks of the Burlington, Milwaukee and Rock Island are submerged somewhere in the foreground in this photo of the Mississippi as it crested near downtown St. Paul.



REFLECTIONS OF A FLOOD

A freight wagon stranded on the platform of the Dubuque passenger station.



OLD MAN RIVER TAKES OVER

The Mississippi River, having overflowed its banks, background center, submerged these rail lines outside of St. Paul. Rail facilities bordering the river were hard hit all the way to Missouri.

were already getting their roads back into service directly behind the record-high water—as the river's crest waters undulated southward. Bridge gangs, section men, engineering forces and operating crews manning work trains were already well-along with the mopping-up of mud and debris littering the properties of more than a dozen roads. Reconstruction of damaged facilities began (in some cases by engineering forces operating from boats) immediately and some affected points were swiftly back in operation. All railroads hit by the flood reported maximum engineering efforts aimed at getting the trains moving again in flooded areas.

• **Outlook uncertain.** The river crest passed Quincy, Ill., late last week and headed south toward Alton—where serious flooding may occur this week. With army engineers reporting higher-than-normal levels for both the Missouri and Ohio rivers, more havoc may be in store along the mid-Mississippi valley this week and next, when the high water pours into the confluence of the rivers at St. Louis and Cairo.

A spot check of railroads reporting heavy damage revealed that several lines crossing or paralleling the upper Mississippi were cut.

Milwaukee was not able to provide any service along its river line from Lacrescent, Iowa, to Muscatine, Iowa. Milwaukee's river crossing at Savanna, Ill., was under water.

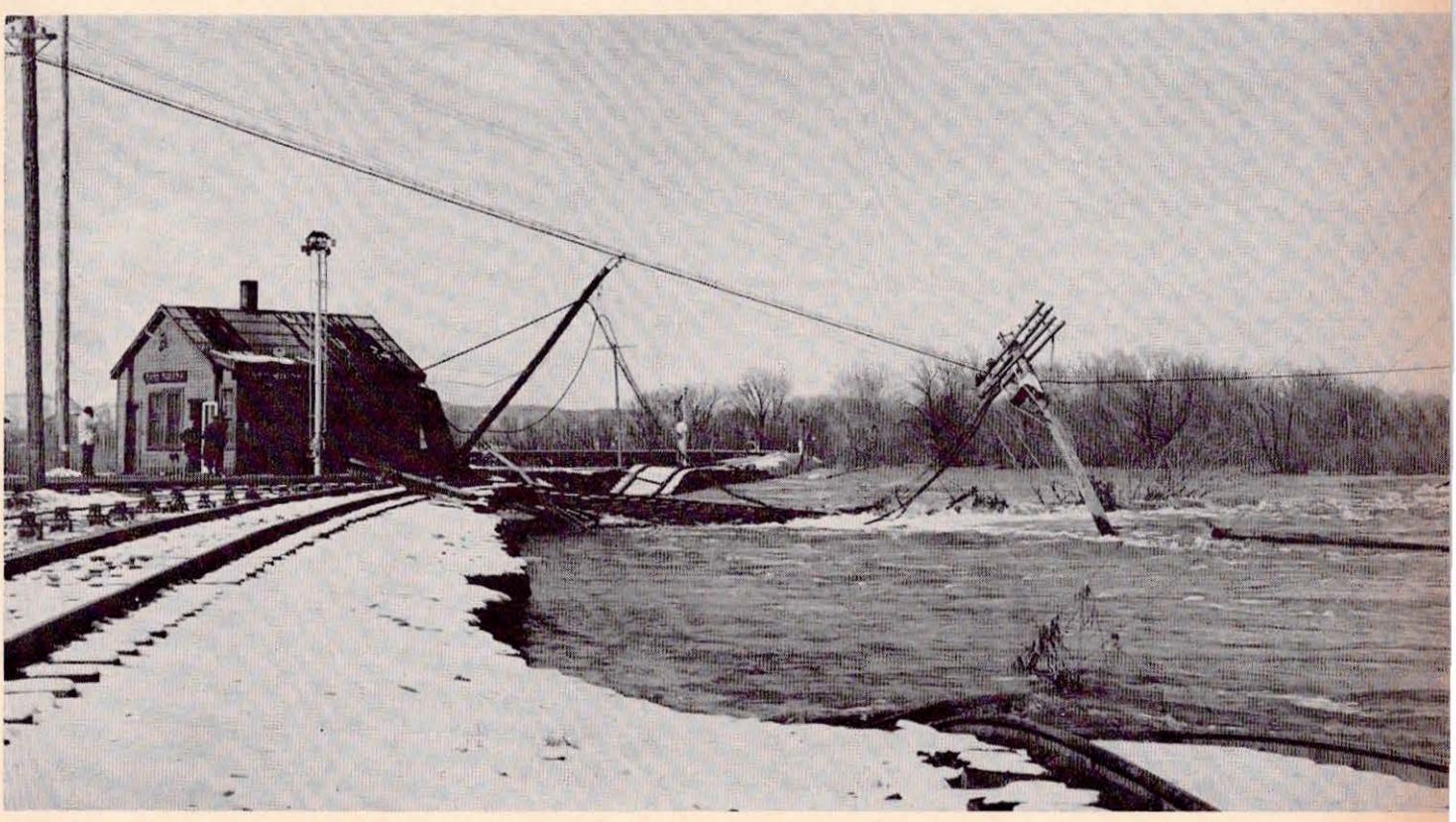
Passenger trains detour

Milwaukee spokesmen weren't even guessing at the damage. They didn't have time. They were working everywhere on the railroad to get back in operation. They were already back in operation at St. Paul, with crews repairing Milwaukee's yard there to handle the freight and passenger trains that went back into service April 27 at noon between Chicago and Minneapolis. Milwaukee's forces had the crossing at Lacrosse, Wis., open and were getting to Kansas City and Iowa points via re-routing and over foreign lines. The "City of Los Angeles," "City of Portland" and "City of Denver" were being rerouted to Cedar Rapids and then back to Milwaukee's line for delivery to Union Pacific at Omaha.

• **C&NW's shops escape.** C&NW's President Clyde Fitzpatrick, like the presidents of other affected railroads, made inspection flights over damaged portions of line in the flood area. C&NW's line across the Mississippi at Clinton, Iowa, was cut. The bridge withstood the rising water, but the approaches to the bridge were inundated. The C&NW's line at Keithsburg—the old M&STL line—was also knocked out of service. The road's big shops at Clinton, however, escaped the flood—as did the road's yard at that point.

• **CGW recovers quickly.** Late last week CGW reported that it was back in operation at all points—except Dubuque. CGW's line, said the road's general manager, H. A. Peterson, was cut by the floodwaters at Mankato, St. Paul, Red Wing, Dubuque and Winona. Service was restored to Winona over C&NW tracks and the road expected to be back in there over its own tracks by May 5. There was a possibility, said Peterson, that CGW's line through Dubuque could be restored in the first days of May. Other damage caused by the flood was to the road's yard in St. Paul and at Hoffman Avenue, with considerable undermining of CGW's line and tracks at those points. Considerable damage to the road's Robert Street bridge at St. Paul was also reported.

• **Workers endangered.** A spectacular water "explosion" ripped CB&Q's embankment approach to the road's bridge across the Mississippi at Burlington, Iowa. Highway 34 underpass at that point was sandbagged and barricaded by floodfighters. But, when the pressure of the rising river could not be contained, the water burst through



THE RAVAGES OF NATURE

Swirling flood waters washed out this Burlington-Green Bay & Western crossing at East Winona, Wis. In one instance, roadbed was undercut to a depth of 30 feet by the rushing torrent.

LOSS & DAMAGE

Milwaukee's freight houses in Minneapolis just below Union Depot looked like this as flood waters crested in the city area. Everything that could be transported to higher ground was moved before the flood hit.

with explosive force and tore a 500-foot hole through CB&Q's important line. Railroad men working there literally had to run for their lives.

CB&Q had to detour east-west traffic via Quincy, where the road has a high-level bridge, and the road's line across northern Missouri.

● **Hardest hit.** Probably the severest damage to any single line was caused by the rampaging river on CB&Q's line going north from Dubuque to the Twin Cities. Many stretches of track were destroyed. One stretch of line near Prairie du Chien, Wis., for a distance of more than 800 feet was underscoured by the swift currents of the floodwaters to a depth of 30 feet.

But, such is the organization and capability of the road's emergency forces, railroad spokesmen said they'd be back in operation around May 10. Engineering officers, led by CB&Q's President Harry Murphy, were out supervising a maximum effort aimed at restoring service even as the river was cresting midway between the Twin Cities and Dubuque. Engineering officers were flying patrol over the damaged lines, directing work trains and repair crews, and inspection sorties continued to be made by air southward as the river threatened CB&Q points downriver.

Damage will run to millions of dollars and losses from traffic that would have been handled if it had not been for the flood will make the spring floods of '65 the most expensive disaster in the road's history.

● **RI raises track.** A heroic effort to keep an east-west line above water was made by the IC (see page 18) and failed. Further south, Rock Island engineering forces rushed to raise almost three miles of line enough to keep it out of water, but were hampered by flooding from back-up canals and storm sewers as well as by levees that buckled late on April 26 on the northwest side of Rock Island. The river crested April 28 at the Quad City area on the Illinois-Iowa line at 22.5 feet, more than seven feet above flood level. ■

Reduce labor costs with void free LANDRETH Pre-molded Urethane foam Panels*

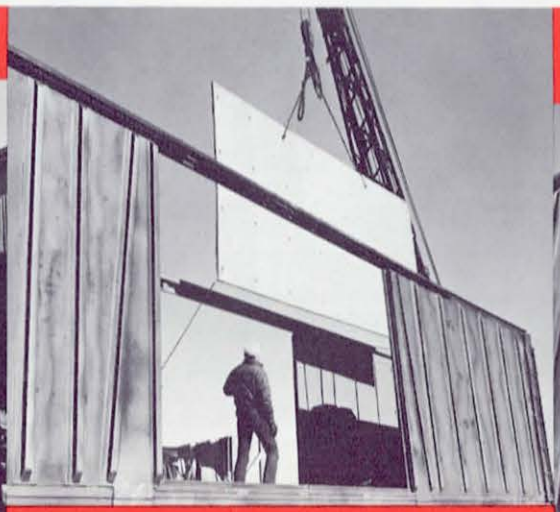
*PATENTS APPLIED FOR

Landreth panels increase insulation efficiency and cut costs

The new Landreth Pre-Molded Urethane Foam Panel enables railroads and car builders to build a better car faster and with less man hours in their shops. The new Landreth system enables the builder to provide a Urethane Foam car without the necessity of installing special machinery and costly facilities.

How to reduce costs and increase efficiency

1 Workmen lowering end panel into place. Panels are moved nto production line on freight ars and lifted into cars on ranes.

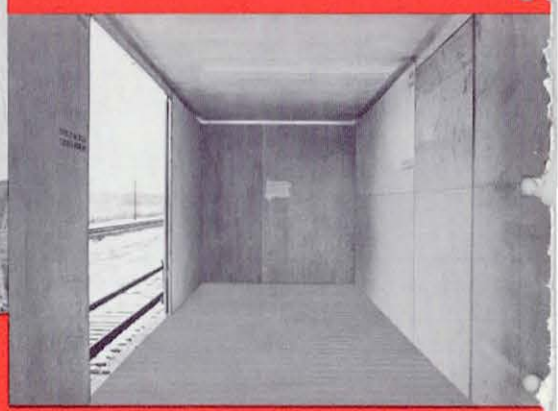


2 Workmen lowering side panel into place.

3 Workmen fitting side panels into place. Only 14 panels per car — panels are pre-trimmed, complete and ready to bolt into place for the sides, ends, ceiling, floor, and door.

4 Workmen fastening "Nelson" stud to outside post. Insula- ion thickness is reduced by ½ over conventional insulation ma- erials.

5 Workmen inserting attaching device which when tightened, secures panel to side of car. This effective fastening system provides fastening without the normally associated heat loss.



6 Finished car. All joints foamed to insure a complete air-tight car.

Landreth's Pre-molded Urethane foam panels* proven best by test

THE Budd COMPANY
TESTING LABORATORIES
PHILADELPHIA, PA.

The Inside Story of Budd Report #2238

The Landreth Insulated Car equipped with Landreth's Pre-Molded Urethane Foam Panels has just undergone exhaustive tests. After six months of road tests, the car was tested in The Budd Company testing laboratories in Philadelphia.

Here are the startling results from the Budd Laboratory's report.

The car constructed with the Landreth Pre-Molded Urethane Foam Panels was to be tested against two other cars constructed with Urethane Foam block. All the cars had been previously road tested for six months or longer.

The Landreth equipped car had absolutely *no air leakage, no hot spots,* and *no voids in the foam.* In addition, at 100 degrees differential, the car built with the Urethane Foam block had a BTU average of 143 BTU's per hour. The car equipped with the Landreth Pre-Molded Urethane Foam Panels also at 100 degrees differential and tested under the exact conditions, showed an average of just 93 BTU's per hour.

The Landreth Insulated Car was at least 50% more efficient than the car constructed with foam block. Conclusive proof that the Landreth Pre-molded Urethane Foam Panel—is "Best by Test"!

Over 2,000 cars equipped with Landreth Pre-molded Urethane foam panels*

Landreth continues to pioneer new equipment and systems for the transportation industry. Landreth's experienced engineers have dedicated over 60 years of service to the railroads as well as to the research and development of quality, labor-saving, and profit-making systems and products.

Our modern plants operating under controlled laboratory conditions, supervised by trained engineering specialists to insure the best possible insulation to *suit your custom needs.*

Ten foam machines, equipped to provide uniform volume and temperature control of the feed streams insure fast and efficient production.

Now you can free capital that would normally be invested in special facilities, research laboratories, engineering, and labor.

*PATENTS APPLIED FOR

Reduce labor costs with easy-to-install Landreth pre-molded Urethane foam panels*

Landreth Pre-Molded Urethane Foam Panels provide a lower K factor, as low as 0.11 (BTU's/sq. ft./hr./°F/in.) at 70 degrees as compared to 0.23 for conventional insulation. Over 90% of Urethane cells are closed. Thus, locking out moisture.

Highest quality controlled Urethane material on the market today

*Patents applied for

Check these features that make LANDRETH pre-molded Urethane foam panels*— best by test!

- ★ No Air Infiltration
- ★ No Localized Hot Spots
- ★ Non-Burning Foam
- ★ Easy Repairs
- ★ Seamless Vapor Barrier
- ★ Greater Thermal Efficiency
- ★ Thinner Walls
- ★ Completely Pre-Fabricated
- ★ Guarantee No Voids
- ★ All Joints Foamed
- ★ No Moisture Absorbtion
- ★ Odor Free and Non-Toxic
- ★ Fungus and Rot Proof
- ★ Added Structural Rigidity
- ★ Improves With Age—Does Not Deteriorate
- ★ Fire Proof
- ★ Does Not Split or Settle From Road Vibration or Temperature Change

Landreth INDUSTRIES, INC.

LANDRETH INDUSTRIES, INC.
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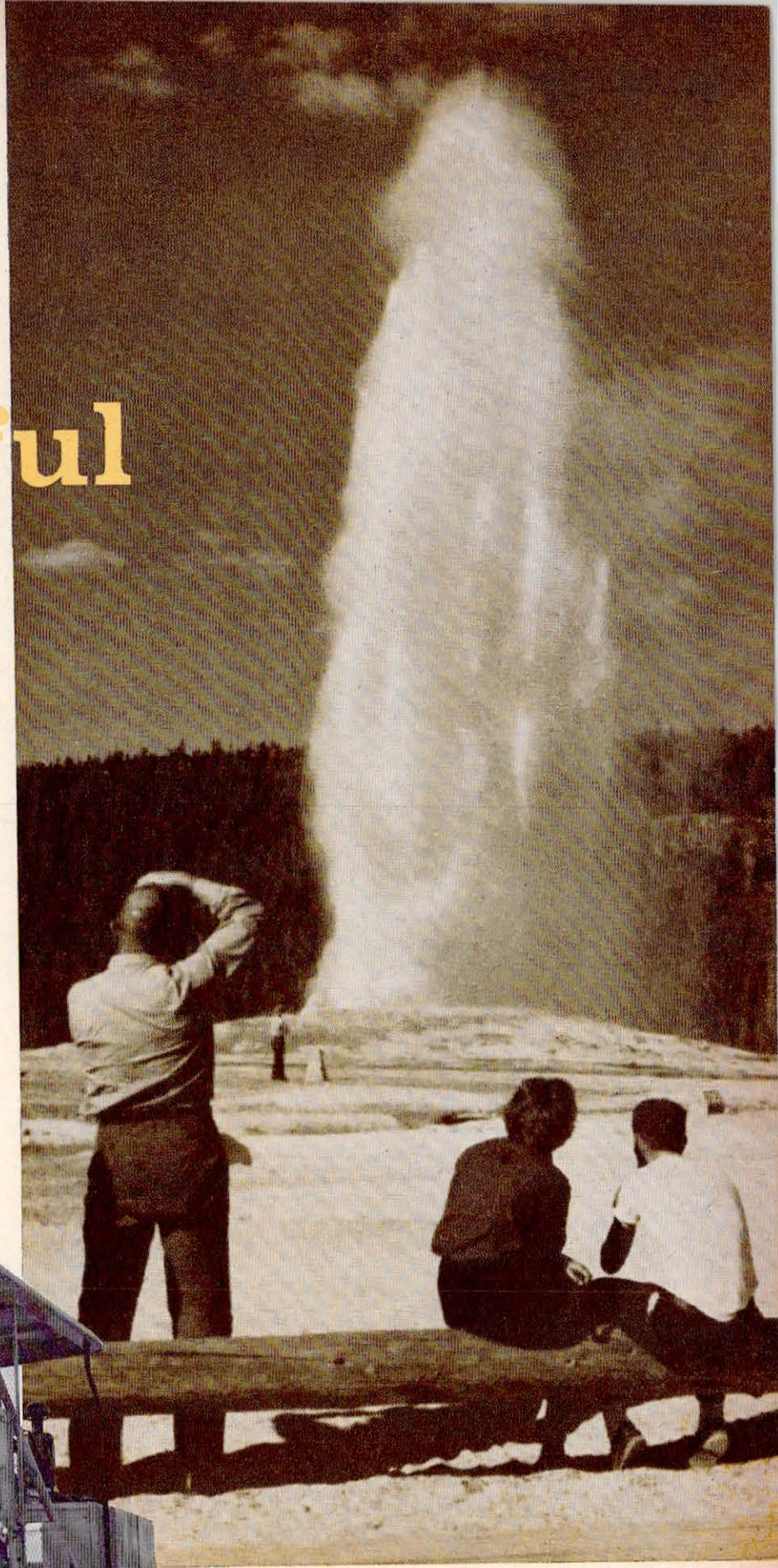
Ever since the inception of mechanized tamping JACKSON has been the "Old Faithful" source of the finest tampers to be had . . . the most dependable, reliable and most productive . . . unmatched for quality of finished track produced . . . backed by the one field service that sees to it that the purchaser obtains the full potential from the equipment purchased.

It is no surprise then, when emergencies or flood waters threaten, engineers always rely on Old Faithful Jackson equipment to perform around the clock without faltering in the race against nature's caprices.



JACKSON VIBRATORS, INC.
LUDINGTON, MICHIGAN, U.S.A.

R3-3

PROBLEM:

How to ensure on-the-job service, along with the installation of your rigid foam urethane insulation?

SOLUTION:

Be sure you're using an ISONATE® foam system, with PAPI already in it. Upjohn and PAPI are inseparable.

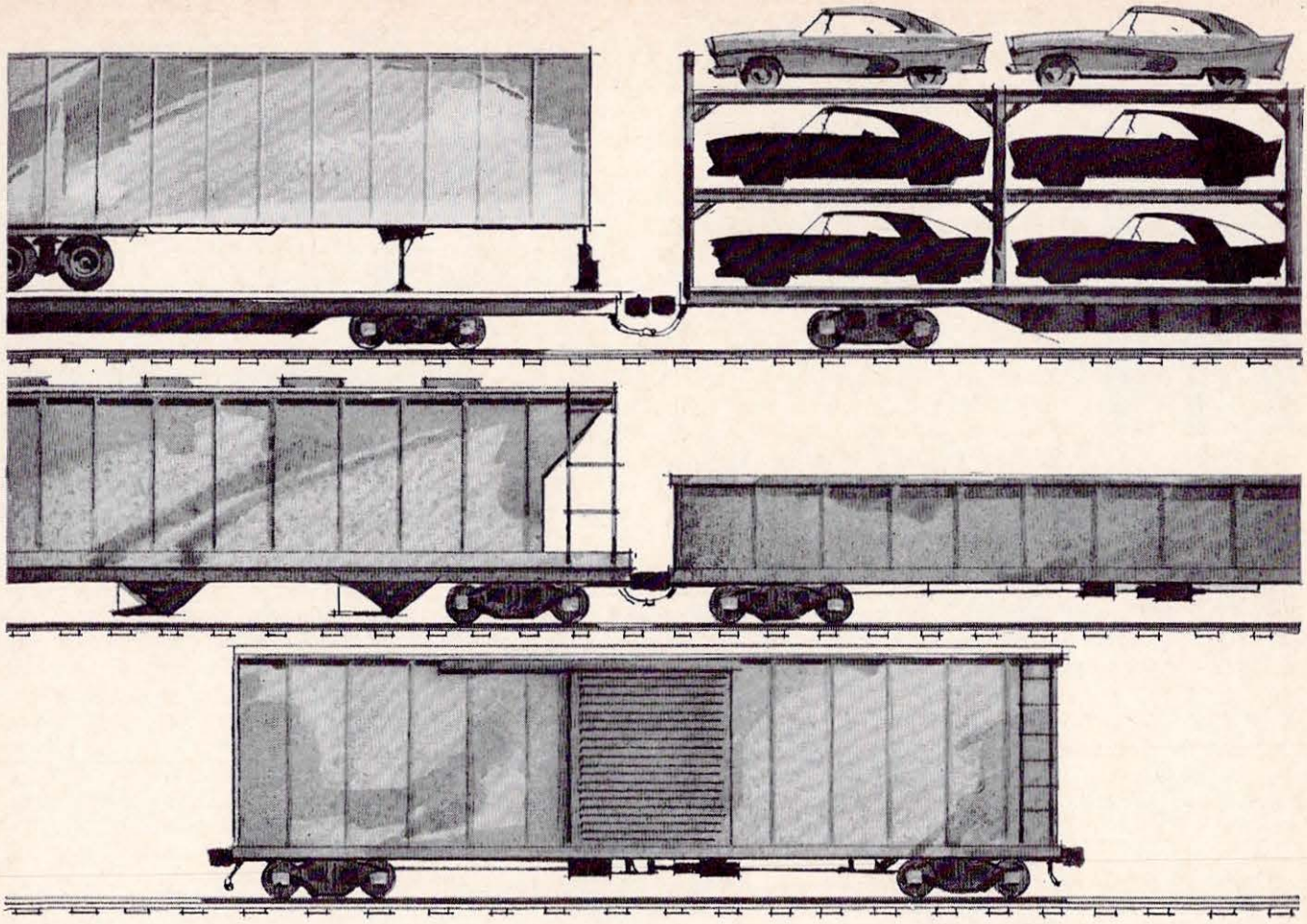
Climb a building where PAPI formulations are being used to insulate walls and ceilings, or ride the rails to where tank cars are being insulated with rigid foam, and the chances are you'll meet an Upjohn man, making sure ISONATE® foam system users are producing superior products safely and economically. Upjohn's experienced research, engineering, manufacturing and sales personnel are specialists in urethanes. They check on their PAPI regularly. You'll find it one of the nicest parts of the product profile.

Upjohn *Polymer Chemicals Division*

THE UPJOHN COMPANY

KALAMAZOO, MICHIGAN

PAPI® • PAPI®-50 • ISONATE® FOAM SYSTEMS • CARWINATE® 125M • CARWINATE® 136T • CARWINATE® 390P



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for freight cars of all types...

SAB Automatic, Double-Acting Brake Regulators AAR Approved

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RAILROADING AFTER HOURS WITH JIM LYNE

LYNE

AIR TRANSPORT'S PROSPERITY—The Air Transport Association is putting out a news summary called "Air Transport Advisory," which recently reported that the domestic scheduled airlines in 1964 invested about 84% of their net earnings in capital improvements. (The railroads in the same year made capital investment that was more than double their net income).

The airlines' news summary also reports that the scheduled airlines in 1964 earned over 10% on invested capital—which is about what the CAB reckons they ought to earn, on the average. The railroads have been trying for decades to get their net earnings up to 6%, but usually succeed in getting only about half that. Another thing about the airlines—in a five-year period they spent about 10 times as much for flight equipment as for ground installations, which of course do not include the ground installations provided for them by government.

A nice business, flying—lots of money in the trousers pockets and a generous uncle on the sidelines, whenever needed. But, as somewhat of a partisan for the railroads, I won't envy the airlines (unless they get all the nickel mail).

A GOOD WORD FOR THE NH—There is a resident of Pittsfield, Mass., William Greene by name, who sends me samples of a lot of local campaigning he does in his area for more equitable treatment for railroads (especially in taxes), thus to retain railroad service. One piece he wrote recently was a real novelty these days—i.e., praise for the service provided by the New Haven, from Boston to New York, and especially for an excellent dining car meal he got for less than $3. (And in 1963 the NH was the only railroad with a dining car cost-to-revenue ratio of less than 100).

There's no doubt that the New Haven is a real hardship case, but that it is still plugging dependably on testifies to the tough sinews of even half-starved railroads. By some countries' standards, what is considered sub-standard service here would be deemed luxurious (particularly in not over-crowding). Our hard-luck railroads may stage a come-back one of these days, if and when they begin to get better treatment from governmental powerhouses in Washington and locally; and when costly duplication of service is further reduced through mergers.

FOUR C's OF RATE-MAKING—Loyd J. Kiernan, in Miami, tells me of an old-time rate-maker named Joe Hattendorf who said rate-making consisted of three C's—Comparison, Competition and Compromise. Loyd would add a forth C—Cost, because what's the use of working for nothing? By comparison, of course, is meant relating rates to those on other similar articles. But the overall result should be to get traffic volume—in which case costs will probably take care of themselves.

No matter how computerized the making of rates may become LJK believes the four C's will still be at the controls. And why not, since the computer (to my non-technical understanding) is mainly a faster way of doing a lot of useful extra figuring that would be too costly to afford with hand-operated machines?

TASK FOR WORDSMITHS—A job those fellows in the Railway Magazine Editors Association (who are working on the improvement of railway terminology) might take on is to come up with a verb which means to ride a train. For instance, people who travel by automobile can say: "We drove" (if they are pretentious swells, they may say: "We motored"). Those who go by plane will say: "We flew". But if they travel by train, there is no single word that conveys the idea.

The obvious word to use, in this sense is perhaps, "train" itself. For example, the fellow who arrives by train in St. Louis from Chicago, when asked what his means of travel was, could say: "I trained." The trouble is that train has too many other meanings. For instance, if an athlete is asked how he keeps in condition, and replies: "I train"—would the meaning be that he takes a lot of exercise, or that he rides the rails regularly?

Or what about using the word "rail" as a verb meaning to travel by train? Here again, "rail" has other meanings. But there ought to be a suitable single word to convey the meaning of train travel—as "fly" and "drive" do for plane and auto travel. We are now open for nominations.

P&S meeting in Chicago

(*Continued from page 17*)

ing, to be presented by chairman R. O. Williams, purchasing agent, Denver & Rio Grande Western.

In its report, the committee also urges that it be permitted to develop a model system to serve as a guide for the establishment of an EDP program on any railroad.

- **Standard packaging.** Committee 4ABC&D P&S Standard Packaging, Unit Loads, Handling Equipment and Visual Report of Actual Application should continue to pursue its present assignments, the group's report recommends.

- **Stationery, printing.** Efforts toward forms standardization should continue to occupy the time of members of Committee 6H&I P&S Stationery and Printing, Office Supplies and Equipment, the committee in effect recommends in its report. To be presented at the annual P&S Division meeting by Committee chairman R. H. Hinton, assistant to director of purchases, Louisville & Nashville, the report specifically recommends that the committee continue to survey and report on forms of a similar nature which could—and should—be standardized; that the group investigate and report on possible savings to be realized in standardizing all machine forms, including interchange forms, to 11-inches in depth, and that the group design and present to the AAR Accounting Division a standard bill of lading and waybill form that would be adaptable for the transfer of interline shipments.

- **Reclamation.** A formula to determine the total cost of handling a reclaimed item from the time and location it becomes available for reclamation to the reclamation shop should be one of the goals of Committee 8ABC&D Reclamation, the committee's tentative report says. Other recommendations will be presented at the meeting by committee Chairman P. L. Schultz, superintendent, rail mill, Santa Fe.

- **Scrap.** Elimination of AAR Standard Scrap Clasifications 1, 6A, 11, 11A, 30, 32, 36, 36A, 38 and 42A; the inclusion of the present class 21 in class 31, and the elimination of all of the class 21 except "Tubes and/or pipe: Wrought iron and/or soft steel" should be studied by Committee 9AB&C Assembling, Classification and Disposition of Scrap during the coming year, the committee recommends in its tentative report. ■

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PEOPLE IN THE NEWS

ATLANTA & WEST POINT—WESTERN OF ALABAMA—GEORGIA.—T. C. Carr, Jr., commercial agent, Opelika, Ala., promoted to general agent there.

BALTIMORE & OHIO.—Kenneth E. Comer, sales representative in Central Ohio, named district sales representative in Tulsa, Okla. He will help expedite service to shippers in Oklahoma and a portion of the Texas Panhandle with freight for delivery in the East.

BOSTON & MAINE.—William J. Britton, general storekeeper, Boston, Mass., appointed purchasing agent there, succeeding the late **Howard R. Sullivan. Herbert C. Brown,** traveling storekeeper, North Billerica, Mass., replaces Mr. Britton.

CANADIAN NATIONAL.—William R. Corner, coordinator of data processing, appointed comptroller, Montreal. **James H. M. Williams,** special assistant, data processing, succeeds Mr. Corner as coordinator of data processing. **Maurice A. Pregent,** assistant chief accountant—freight, named chief accountant—freight.

W. H. Collins, regional freight sales manager, Atlantic Region, Moncton, N.B., retired after 42 years of service.

R. S. Waddington, work study officer—equipment, Great Lakes Region, appointed superintendent of equipment, Northern Ontario Area, Capreol, Ont., succeeding **W. L. Draper,** transferred.

CHESAPEAKE & OHIO—BALTIMORE & OHIO.—J. H. MacAnanny, general manager transportation planning of both roads at Baltimore, Md., appointed assistant to vice president there. He will have responsibility for planning activity with the C&O and B&O transportation functions and for directing projects within the Planning Department.

CHESAPEAKE & OHIO.—Wayne Lowe appointed general car foreman, Columbus, Ohio, succeeding **A. B. Ray** (RA, April 5, p. 29). **R. F. Whaley** appointed general car foreman, Walbridge, Ohio.

A. J. Hallinan and **H. A. Jones** appointed assistants to treasurer, with headquarters remaining at Cleveland, Ohio.

CHICAGO & NORTH WESTERN.—J. N. Ball, superintendent, Chicago Freight Terminal division, Proviso, Ill., named assistant to the general manager-special services. **H. C. Hawk,** trainmaster, Nebraska division, Sioux City, Iowa, succeeds Mr. Ball, and in turn is replaced by **S. F. Kujawa. H. C. De Pierre** and **H. O. Tell** named operating assistants-special services.

CHICAGO & WESTERN INDIANA.—Robert E. McMillan, vice president and general manager, elected president and general manager. **John H. Park,** general counsel, elected vice president and general counsel. **Richard G. Rubino,** auditor, elected vice president and auditor.

CLINCHFIELD.—Howard C. Brown appointed supervisor bridges and buildings, Erwin, Tenn., succeeding **J. C. Hobbs,** resigned.

DENVER & RIO GRANDE WESTERN.—R. E. Davis appointed traffic manager, headquarters Hotel Utah, Salt Lake City, Utah, succeeding **J. D. Key,** appointed trainmaster, Salt Lake City.

William R. Corner
CN

James H. M. Williams
CN

ERIE LACKAWANNA.—Robert M. Rockenfield appointed coal freight agent, Pittsburgh, Pa., succeeding **Merle S. Sweeney,** coal traffic sales agent, who retired April 30 after nearly 43 years of service.

FERROCARRIL DEL PACIFICO.—Felipe Guzman Martinez appointed general purchasing agent, Guadalajara, Jalisco, Mex., succeeding **Eduardo Peters Lopez,** resigned.

FLORIDA EAST COAST.—H. E. Hales, general superintendent motive power, St. Augustine, appointed assistant to president there. **S. D. Smith,** superintendent diesel maintenance, succeeds Mr. Hales as general superintendent motive power (RA, April 5, p. 29).

NEW HAVEN.—J. M. Finch appointed assistant vice president, planning and research, New

About Our Own 1,000-Car Annual Rail Shipments . . .

If we were not already a substantial supplier of railway forgings, we would still have a vital concern for the quality and performance of American railway freight cars.

During a year's time we ship and receive almost a thousand carloads of rail freight, ranging from steel and bulky farm implements to compact assemblies and forgings of all sizes. Like many others, we build our marketing plans and production schedules around the assurance of reliable rail transportation.

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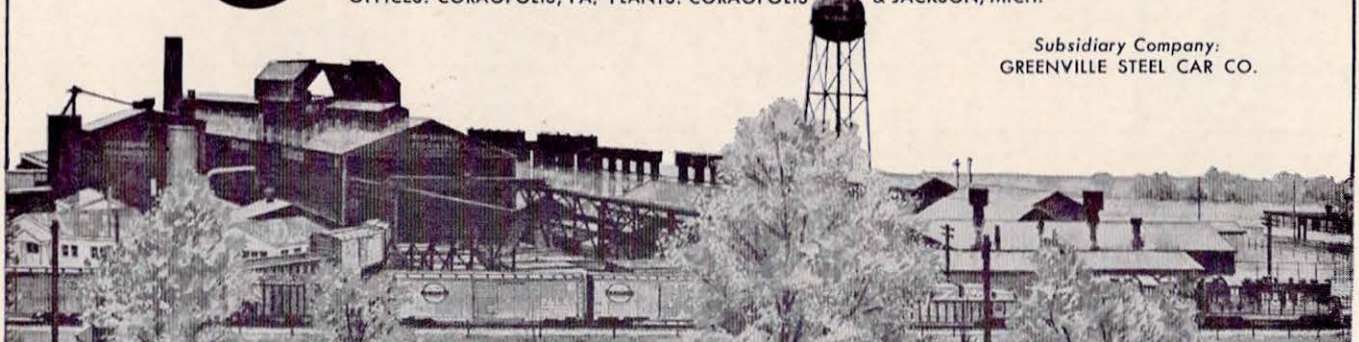


FORGED FREIGHT CAR PARTS AND FABRICATED ASSEMBLIES

Robert E. McMillan
C&WI

John H. Park
C&WI

Richard G. Rubino
C&WI

Eugene F. Leonard
Railway Age

Thomas H. Wagner
Gross & Janes

Herbert A. Boas
GSI

Haven, Conn. Abolished position of assistant to vice president—research, formerly held by Mr. Finch.

NORTHWESTERN PACIFIC—SAN DIEGO & ARIZONA EASTERN.—D. K. McNear elected president of these roads, at San Francisco, Calif., succeeding **D. J. McGanney,** who retired March 31. Mr. McNear was president of the **Holton Inter-Urban** and the **Petaluma & Santa Rosa** and assistant to president of the **Southern Pacific.**

PEORIA & PEKIN UNION.—F. Mueller appointed assistant to general manager, Peoria, Ill. He will be responsible for personnel and operating administrative duties.

L. R. Tilly, transportation and mechanical officer, will be responsible for the direct operation of trains and maintenance of equipment.

E. J. Brosseau, superintendent, retired April 1 after more than 48 years of service.

PIEDMONT & NORTHERN.—A. Crawford Moore, Jr., auditor and assistant treasurer, Charlotte, N.C., promoted to treasurer and general auditor, succeeding **C. L. Taylor,** retired (RA, April 5, p. 30). **W. H. Grigg,** attorney, elected secretary, to succeed **George W. Ferguson, Jr.**

SANTA FE.—James A. Parkinson, general superintendent of communications and signals, Chicago, retired April 30. **M. D. Breeden** named acting superintendent of communication, Coast Lines.

SOUTHERN PACIFIC.—C. B. Nines appointed executive assistant, San Francisco, Calif.

WESTERN MARYLAND.—W. S. Chaney appointed general mechanical pier foreman, Port Covington, Md., and **R. B. Martin** named assistant master mechanic—system, Hagerstown, Md. Abolished offices of assistant master mechanic, Baltimore, and assistant master mechanic, Western Division, formerly held by Messrs. Chaney and Martin.

Supply Trade

Eugene F. Leonard, 35, signal draftsman, **Milwaukee Road,** has been appointed associate editor, **Railway Age** and **Railway Signaling & Communications,** effective May 1. Mr. Leonard will be headquartered in Chicago.

Thomas H. Wagner elected president of **Gross & Janes Co.,** succeeding **Francis L. Gross,** elected chairman of the board. Former vice president **R. G. Juengel** was named executive vice president. Messrs. Wagner and Juengel are both past presidents, Railway Tie Association.

Herbert A. Boas, Jr., has been elected vice president, assistant to the president, **General Steel Industries,** Granite City, Ill., with responsibilities in the area of marketing. Mr. Boas previously held sales and marketing positions with the Budd Co., Philadelphia, and Sinclair Oil Corp., New York.

Edward G. Budd, Jr., president of the **Budd Co.,** Philadelphia, has been elected chairman of the board, a new post. **Philip W. Scott,** executive vice president, has been elected president.

D. G. Braithwaite elected chairman of the board, **Nalco Chemical Co.,** Chicago, succeeding **Thomas C. Jones,** retired. Mr. Braithwaite continues as president and chief executive officer. Mr. Jones will continue as a director and member of the executive committee. **Lawrence L. Bott** and **Robert T. Powers** elected executive vice presidents. Messrs. Bott and Powers are directors and were formerly vice presidents and administrative assistants to the president. Mr. Powers will be concerned with administrative and marketing affairs and Mr. Bott, with technical operations.

Edward G. Budd, Jr.
Budd Co.

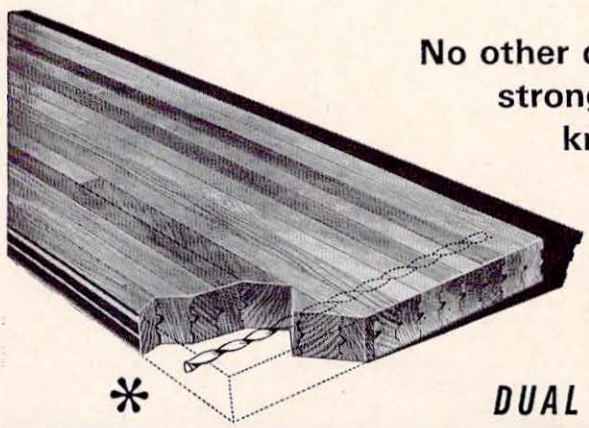
Philip W. Scott
Budd Co.

Thomas R. Eggert has been named manager of brake shoe sales for **Griffin Whlel Co.,** subsidiary of **AMSTED Industries,** at Chicago. Mr. Eggert was formerly general sales manager of LFM Manufacturing Co., Atchison, Kan.

OBITUARY

LeRoy H. Stecker, 53, general superintendent, **Port Authority Trans-Hudson Corp.** (PATH), died April 20 at Columbia Presbyterian Medical Center, New York, following a short illness.

Louis S. Taylor, 93, retired executive vice president, **Pullman Incorporated,** died April 19 in Santa Barbara, Calif.



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GOOD NEWS

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New Cooler Running
Longer Life Armature Coils
Available for all
GE-752 Traction Motors

COOLER RUNNING

Eight percent more silver bearing copper has been added to GE-752 armature coils to obtain the higher rating of the E6 traction motor. These new, tougher coils will fit *all models* of GE-752 armatures.

Not only do these new coils run cooler but fit the slots better thus reducing thermal stress and vibration — extending insulation life. Furthermore, only General Electric standardized coils provide the flexibility to maintain a minimun armature pool for all your GE-752 needs today and tomorrow.

LONGER LIFE

Teflon* insulation with its unique smooth surface, reduces insulation damage from coil movement.

Only G-E coils minimize the abrasive action from vibration and thermal stress by using additional Teflon insulation on the coil in areas subject to severest vibration.

In addition, glass reinforced Teflon is used to permit armature coils to expand and contract with minimum abrasion at the pinion end. Teflon provides the smoothness needed to give longer insulation life at higher locomotive speeds.

* Reg. Trade-mark of E. I. DuPont de Nemours & Company.

MORE MILES

New, cooler-running GE-752 coils are designed for higher current rating and greater ability to withstand vibration. Yet, these more rugged coils still incorporate all the proven General Electric features developed through years of experience in building locomotive equipment and parts. Now these coils, with more copper and utilizing Teflon, deliver the punch required to rate in today's high speed, high horsepower locomotive operation.

Specify General Electric coils when rewinding your GE-752 armatures.

For further information on how General Electric Armature Coils can reduce your maintenance expense, let your G-E Renewal Parts Sales Engineer present the full GE-752 armature coil story. Call him today.

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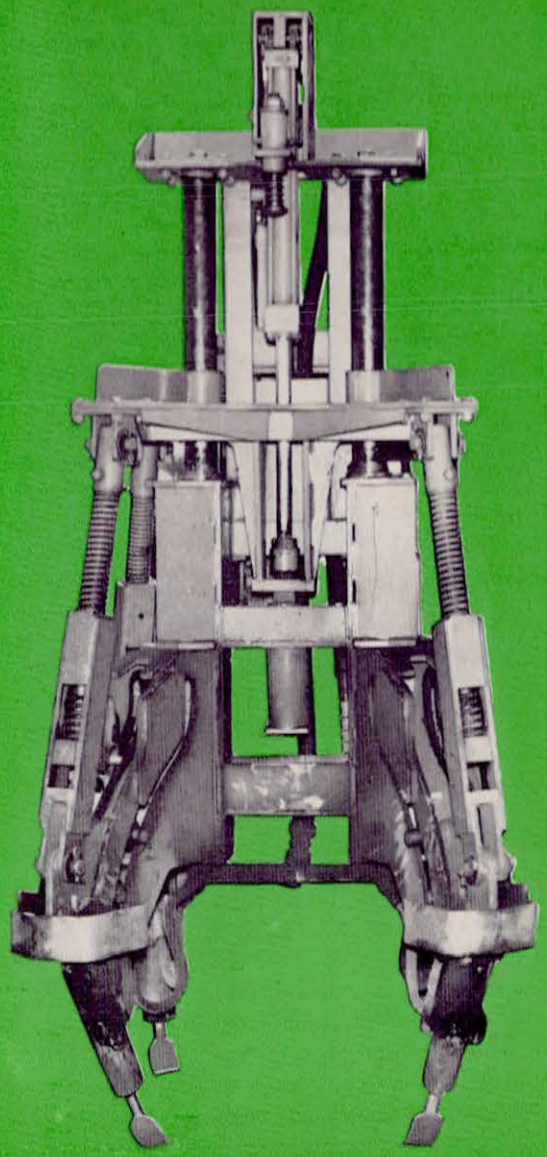
GENERAL ELECTRIC



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All McWilliams Tampers have been redesigned to include new hydraulic tamping tools, efficient hydraulic power package and spring-loaded connecting rods. Results: faster, livelier tamping action — still with traditional McWilliams-quality track. Now, more than ever, when you want the track to stay up—use a McWilliams.

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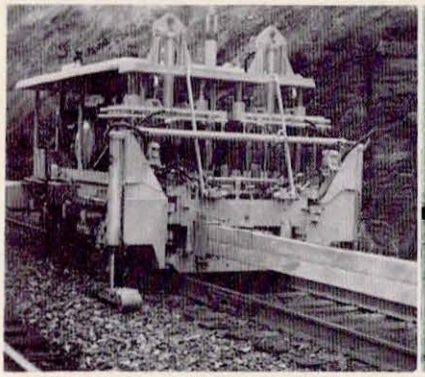
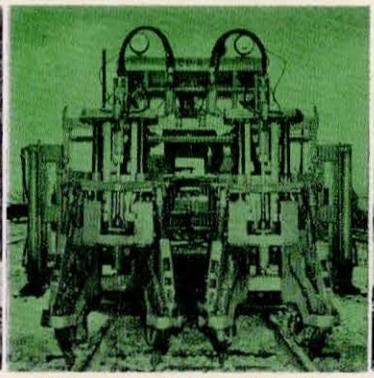
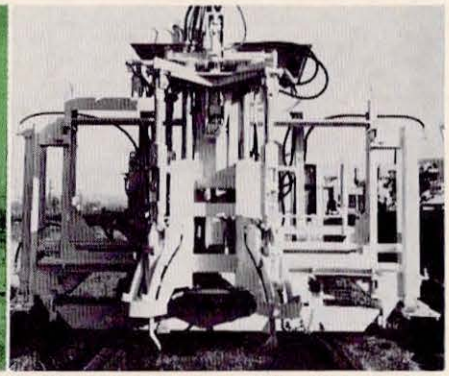


McWilliams Hydramatic-16 Production Tamper, with RMC surfacing device.



McWilliams Hydraulic 8, available with two 4-tool heads or four 2-tool heads—by far the most versatile multipurpose tamper.



McWilliams Spot Tamper, available with two head designs—for maximum speed in open track work; or for use mainly where switch tamping work predominates.

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ABOUT THE MARK 50?

Proved protection for your freight cars. Over 38,000 car sets of the Westinghouse Friction Draft Gear Mark 50 are in action on 86 railroads and private car lines in the U. S. and Canada.

It's the **first** friction draft gear awarded Unconditional Approval under A.A.R. Specification M-901E for high capacity gears (Certificate No. 41).

The A.A.R. wanted 36,000 foot-pounds capacity at a reaction force level of 500,000 pounds. The Mark 50 has it.

Wherever your freight cars roll, in switching and in hump operations, whatever the speeds, the Mark 50 keeps bad-ordered cars and maintenance costs to a minimum. Your cars arrive on time.

Fits 24⅝-inch pockets . . . for use on all types of equipment.

Make your mark in the profit column and specify Mark 50!

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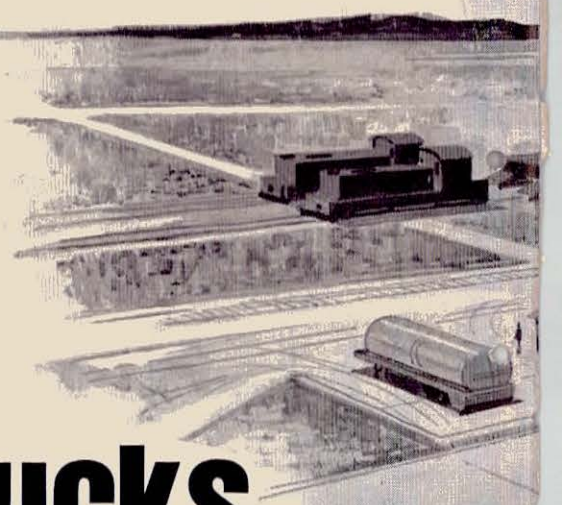
CANADIAN CARDWELL CO. LTD., MONTREAL 2, QUEBEC

Titan III moves to Launch Pad on Buckeye Trucks



The Titan III has been developed by the Air Force as a standard space launch system, capable of performing a variety of manned and unmanned booster missions. It is able to place over 25,000 lbs. in a 100-nautical mile orbit or more than 17,000 lbs. in a 1,000-nautical mile orbit.

Titan III, launched from Cape Kennedy, utilizes an off-pad assembly technique. Liquid propellant stages, payloads — and in the most powerful configuration — solid propellant booster motors are assembled and transported by rail to the launch pad.

The rail transporter or Titan III undercarriage utilizes 16 Buckeye 4-wheel trucks. In this important assignment, where failure cannot be tolerated, the rugged components of Buckeye trucks are in service. This demonstrates again Buckeye's ability to meet the diverse requirements of modern railroad castings.

If you have shippers who have complex or unusual transportation needs; contact Buckeye. Our engineers and castings experts are well qualified to produce the castings required to meet the changing demands of modern shippers. Try us.

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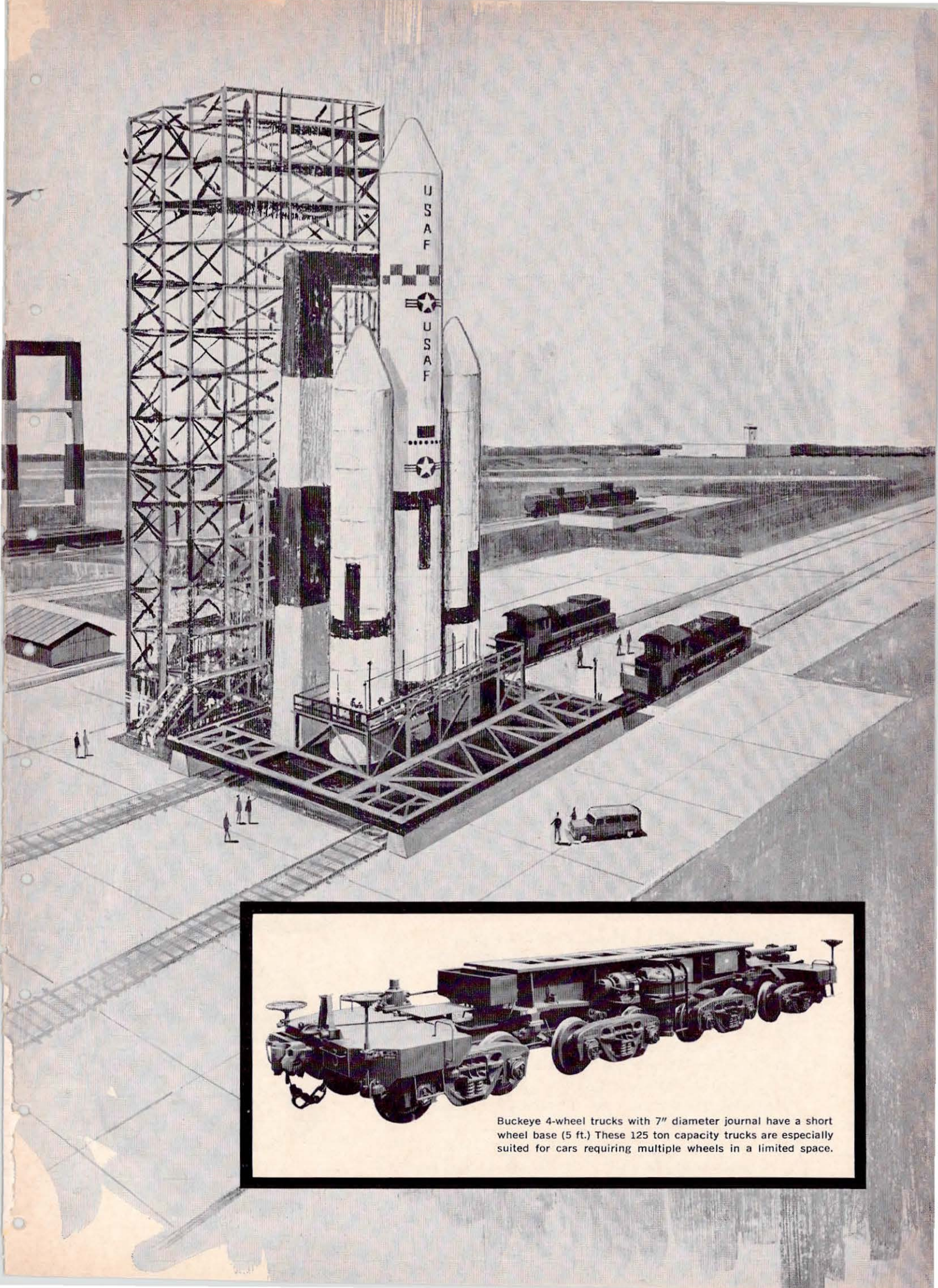
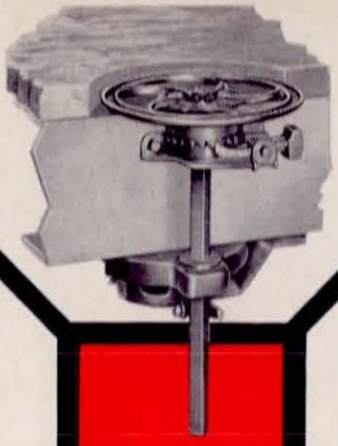
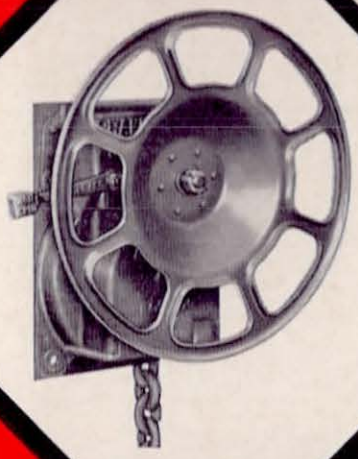


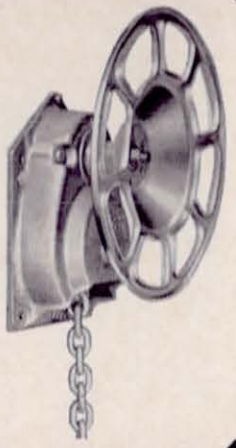
Buckeye 4-wheel trucks with 7″ diameter journal have a short wheel base (5 ft.) These 125 ton capacity trucks are especially suited for cars requiring multiple wheels in a limited space.

HORIZONTAL
DROP-TYPE HAND BRAKE
Equipco A.A.R. No. 3657
(Drawing No. 20021)
☐ Expressly designed for Flat Cars



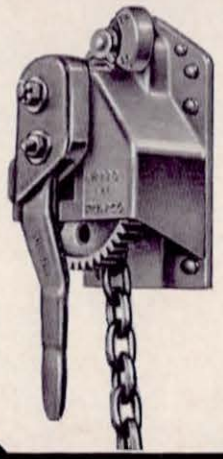
VERTICAL WHEEL
HAND BRAKE
Equipco A.A.R. No. 3750-E
(Drawing No. 10024)
☐ With non-spin 2-way wheel



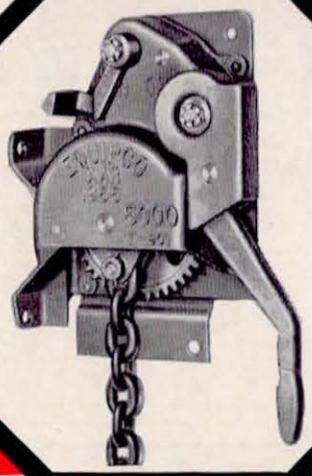


VERTICAL WHEEL
HAND BRAKE
Equipco A.A.R. No. 4000
(Drawing No. 10040)
☐ With quick release non-spin lever and non-spin 2-way wheel

LEVER-TYPE HAND BRAKE
Equipco A.A.R. No. 3700-B
(Drawing No. 30023)
☐ For Piggy-back Cars and Drop-End Gondolas



NEW! THIN-PROFILE
LEVER-TYPE HAND BRAKE
Equipco A.A.R. No. 5000
(Drawing No. 30042)
☐ Special design (4½" deep) for Piggy-back-type Cars



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You see the reasons above. Five different hand brake types... each A.A.R. certified... each Equipco-engineered to assure the utmost in safety, reliability and ease of use. With the addition of our new Thin-Profile Lever-type design (see above), the hand brake coverage now offered by Equipco is totally unsurpassed. Why not play it safe. On your next order, check *first* with Equipco... the industry's hand brake headquarters.

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☐ No. 740-12: A.A.R.-63 Bell Crank
☐ No. 619: A.A.R.-55 Bell Crank
☐ No. 680: Sheave Wheel. 8" P.D.

Equipco

HAND BRAKE DIVISION

UNARCO INDUSTRIES Inc.

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MARKET OUTLOOK

Carloadings

Loadings of revenue freight in the week ended April 24 totaled 578,712 cars, the Association of American Railroads announced on April 29. This was an increase of 23,550 cars, or 4.2%, compared with the previous week; an increase of 13,069 cars, or 2.3%, compared with the corresponding week last year; and an increase of 1,688 cars, or 0.3%, compared with the equivalent 1963 week. Ton-miles generated by carloadings in the week ended April 24 are estimated at approximately 13.5 billion, an increase of 7.4% over the corresponding week of 1964, and 10.4% over 1963.

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, Apr. 24

District	1965	1964	1963
Eastern, including Allegheny and Pocahontas ..	241,222	227,084	239,251
Southern	117,843	114,853	117,851
Total Eastern and Southern Districts	359,071	341,937	357,102
Northwestern .	69,876	72,038	65,081
Central Western	111,000	113,338	114,605
Southwestern .	38,765	38,330	40,236
Total Western Districts	219,641	223,706	219,922
Total All Roads	578,712	565,643	577,024
Commodities:			
Grain and Grain products	46,401	45,792	53,651
Livestock	2,028	2,673	3,574
Coal	111,631	107,873	110,759
Coke	9,961	8,154	8,252
Forest Products	38,182	38,754	35,961
Ore	38,329	36,359	25,568
Merchandise l.c.l.	9,444	13,356	17,925
Miscellaneous .	322,736	312,682	321,334
Apr. 24	578,712	565,643	577,024
Apr. 17	555,162	576,343	561,261
Apr. 10	564,637	522,572	556,081
Apr. 3	548,714	513,822	546,021
Mar. 27	541,399	520,527	558,613
Cumulative total, 17 weeks ...	9,077,944	8,892,926	8,839,499
Estimated revenue ton-miles (billions) 17 weeks ...	219.9	207.1	192.3

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended Apr. 17 totaled 19,155 cars, compared with 17,160 for the corresponding 1964 week. Loadings for 1965 up to Apr. 17 totaled 297,870 cars, compared with 255,133 for the corresponding period of 1964.

IN CANADA.—Carloadings for the seven-day period ended April 7 totaled 71,447 cars, compared with 110,132 for the previous ten-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
April 7, 1965	71,447	27,228
April 7, 1964	72,076	25,324
Cumulative Totals		
April 7, 1965	950,013	335,359
April 7, 1964	952,707	352,972

FREIGHT-TRAIN CARS

► *Burlington Refrigerator Express.*—Will acquire 200 mechanical refrigerator cars to be built in Burlington shops at Havelock, Neb. All of the cars will be 60-foot models with foamed-in-place insulation; half will be equipped with meat rails and half with loading devices.

► *Fruit Growers Express.*—Will build 403 RB bunkerless cars and 200 mechanical refrigerator cars at Alexandria, Va.; assembly of RB cars has just started. All cars will have polyurethane foamed-in-place insulation, cushion underframes and roller-bearing trucks. FGE's new equipment expenditures in 1965—including associated Burlington Refrigerator Express and Western Fruit Express—will exceed $26 million, according to J. J. Quinn, president.

► *Santa Fe.*—Ordered 200 50½-ft box cars from ACF at a cost of approximately $3.3 million. Delivery of the cars, which will be equipped with roller bearings and Shock Control underframes, is scheduled for second quarter 1965.

► *Western Fruit Express.*—Ordered 200 mechanical refrigerator cars from Pacific Car & Foundry with delivery beginning in August. Each car will have a lading space of over 4,000 cubic feet; all will be fitted with load dividers and will be insulated with foamed-in-place polyurethane.

► *Orders Increase.*—Orders were placed in March for 7,831 cars, compared with 5,194 in February. Orders in March 1964 totaled 7,040. Deliveries in March totaled 6,144, compared to 6,591 in February and 6,580 in March 1964. Backlog of cars on order and undelivered as of April 1 totaled 36,491, compared with 34,909 on March 1, and 36,219 on order April 1, 1964.

TYPE	Ordered March, 1965	Delivered March, 1965	On Order And Undelivered April 1, 1965
BOX—PLAIN	3,310	2,069	9,835
FLAT	1,525	719	3,266
GONDOLA	1,455	278	3,671
HOPPER	186	885	7,585
COVERED HOPPER	501	1,211	4,095
REFRIGERATOR	293	445	5,513
TANK	561	400	1,895
CABOOSE		7	32
OTHER		130	599
TOTAL	7,831	6,144	36,491
CAR BUILDERS	6,025	4,340	20,428
RAILROAD SHOPS	1,806	1,804	16,063

PIGGYBACK

► *Erie Lackawanna.*—Ordered 200 40-ft dry-van trailers at a cost of $1 million for its piggyback fleet. The trailers will be built by Trailmobile Co., and deliveries are scheduled for June and July.

LOCOMOTIVES

► *Green Bay & Western.*—Ordered one 2,400-hp diesel-electric locomotive from Alco for delivery in August.

► *New Haven.*—Plans to acquire 16 U25B diesel-electric freight locomotives at a cost of $2.9 million from General Electric. Trustees have applied to a federal court for permission to make the purchase.

YOU OUGHT TO KNOW

A long time between hotboxes: Trailer Train, owner of the nation's largest fleet of roller-bearing freight cars with an average of 17,986 units in service last year, reports that during 1964 its cars operated 41,010,962 miles per setoff due to journal failure. National average for all freight cars with all types of journal assemblies was 1,175,689 miles per setoff. All but 25 TTX cars have roller bearings and some have accumulated more mileage than any other freight cars in the nation. "It must be recognized," cautions J. P. Newell, TTX president, "that there is some question as to whether this record can be maintained as the roller bearings become older."

B&O plans new coal pier: Baltimore & Ohio will build a $10 million coal pier at Curtis Bay near Baltimore. Included in the plans are construction of a high-speed ship loader with a twin rotary dumper for export coal; a barge loader with a single rotary dumper for coal going to Baltimore; and 11 load tracks with a capacity of 439 cars. Coal tonnage handled at Curtis Bay has been increasing since 1961; 5.6 million tons were handled at the pier in 1964.

West by rail: About 150 travel agents from New York, New Jersey and Connecticut attended classes in a parlor car in Grand Central Station last week to learn the fine points of selling rail travel in the west. The General Passenger Committee—Eastern Railroads was sponsor of the seminars, which covered rail routings, reservations, tickets and fares, sleeping car accommodations and other details of rail travel in the western U.S., Canada and Mexico.

Railroads fumble self-selling: The railroads did a marvelous job in World War II; and continue to do it, but are not exerting themselves as they should to get credit for what they are doing—in improved service at reduced rates, despite governmental handicaps. Such was the theme of an address to the New York Railroad Club on April 22 by Atlantic Coast Line President W. Thomas Rice. The public doesn't adequately realize the major emergency transportation job the railroads did during the Cuban crisis, he said, nor the fact that railroads are doing more for the industrial development of the areas they serve than all other agencies combined. "We don't tell the story we should—nor often nor emphatically enough," he said, and he asked for the cooperation of suppliers in improving the railroad image.

BLE balks at radio: Locomotive engineers, protesting installation of radios in cabs, struck the Belt Railway of Chicago—and were promptly sent back to work under a temporary restraining order granted in U.S. District Court. A hearing is now set for June 14, and the order will remain in effect until June 16. The Belt, owned by 12 trunk-line carriers, serves about 400 on-line industries and is the city's biggest terminal and switching road.

"Pennsylvania can become the center of the developing mass transit industry," Governor William Scranton told a special business press luncheon in New York. His optimism, he told a Railway Age editor, is based on location within the state of four major suppliers of mass transit equipment—Budd, Westinghouse Electric, Westinghouse Air Brake and General Electric.

New service order agent: ICC Service Orders 935 and 947 have been amended to provide for their administration by R.D. Pfahler, assistant director of the Commission's Bureau of Safety and Service, as well as by Director Charles W. Taylor of that bureau. Order 935 now authorizes either Pfahler or Taylor to require placement of embargoes by railroads, and Order 947 authorizes either of them to enforce that order's operating regulations for the movement of freight cars. The latter order was further amended to make it clear that special car orders, as well as freight-car distribution orders issued by the AAR's Car Service Division, must be obeyed.

Truck tonnage: Intercity truck tonnage in the week ended April 17 was 4.5% below the volume of the previous week, and 2.7% above the volume in the corresponding week of 1964, according to American Trucking Associations.

Current statistics

Net income	
12 mos., 1964	**$699,000,000**
12 mos., 1963	**651,000,000**
Carloadings, revenue freight	
17 wks., 1965	9,077,944
17 wks., 1964	8,892,926
Freight cars on order	
April 1, 1965	36,491
April 1, 1964	36,219
Freight cars delivered	
3 mos., 1965	18,865
3 mos., 1964	17,300
Serviceable cars	
March 1, 1965	1,406,712
March 1, 1964	1,411,426

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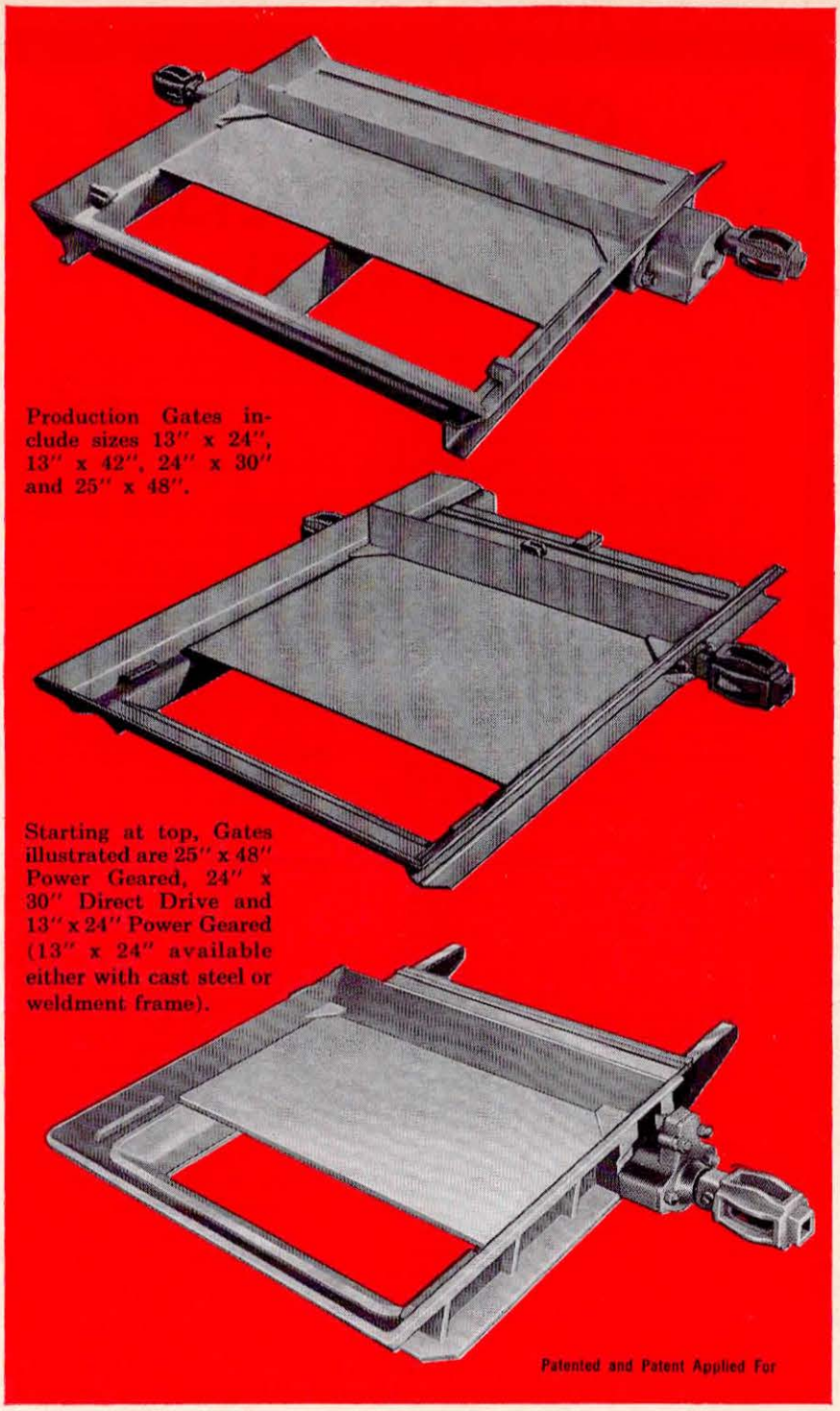

Production Gates include sizes 13" x 24", 13" x 42", 24" x 30" and 25" x 48".

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Requires BSEE and at least 10 years experience in railroad or heavy automotive electrical systems, and electric and mechanical traction drive systems. Experience in installation engineering associated with electrical systems, train control, ducting and train lines, as well as knowledge of componentry such as air conditioning, brake systems, heating and lighting systems, is required. Must be capable of supervising small group of engineers engaged in developing design specifications for transportation systems.

RAILROAD SYSTEMS ENGINEER

Requires BSME or BSEE and a minimum of 10 years experience in the integration of railroad mechanical, electrical, heating, ventilating, lighting and air conditioning, and installation of train services. Egineering background in the establishment of performance requirements, and the evaluation of component capabilities to meet these requirements, is necessary. Position entails supervision of small engineering group.

SENIOR STRESS ANALYST

Requires a BSME or BSAE and a minimum of 5 to 10 years experience in major structural and mechanical design studies development. Ability to develop methods for analysis of stresses, loads, section effectivities, and to determine efficient, economical transportation vehicle structures required. Capability in analysis and design of suspension systems and similar high-load energy absorbing mechanisms is sought. Position involves providing structural and mechanism design concepts which result in practical hardware. Also evaluating structure integrity of designs and recommending related design changes.

SENIOR DESIGN ENGINEER

Requires BSME or BSAE and at least 5 to 10 years applicable experience in the design of lightweight airframe-type structures applicable to transportaion vehicles. Capabiliy required in the design of load-absorbing mechanisms, suspension systems and transmission systems. Preliminary design experience necessary as well as ability to make preliminary layouts and establish structural load paths. Familiarity with manufacturing procedures required to follow through and develop practical hardware from preliminary drawings also a prerequisite.

ASSISTANT PURCHASING AGENT

Requires Bachelor's Degree in Engineering or Business, and a minimum of 10 years buying experience in the procurement of materials, equipment and subcontracting associated with the design and manufacture of railroad passenger cars and locomotives. Must be able to work from blue prints and engineering specifications. Thorough familiarity with sources of supply and good working knowledge of AAR specification requirements is necessary.

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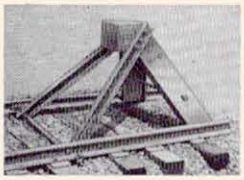

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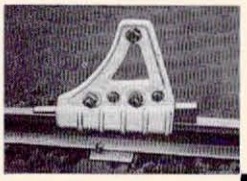

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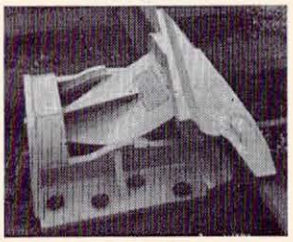

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Why railroads must grow

Total traffic growth will bring volume that only land-economizing railroads can handle, as some cities are beginning to find out.

Is the current fantastic success of the automotive industry in selling its products ascribable to the superior merit of these products, or to the industry's skill in merchandising? Or is not the present volume of automobile production the result, primarily, of the way the nation's highway system has been developed and expanded in the years since World War II? But, of course, the expansion of the highway system did not just happen. It was brought about by a lot of far-seeing and imaginative planning, years ago, by automotive industry leaders and their allies.

Could similar expansion and intensive development of railroads be induced by the application of similar methods? Why not? There are some differences, of course. Highway expansion has leaned primarily on the public treasury, as railroads could not. But a 1,000-mile stretch of railroad that could move economically heavy freight trains at up to 90 mph (with no intermediate stops occasioned by traffic congestion) should be just as attractive to added traffic as a 1,000-mile superhighway is. Improved service or improved economy not only divert business from competing modes, but create brand new business as well.

Intensive improvement of inland waterways by the federal government has attracted mass movement of bulk commodities to barges, but railroads have shown that they can produce equivalent economies (and at much faster speeds) by their unit trains. There is a lot of fuel now moving by rail that, except for these trains, would be using other modes (and the fuel being moved might be different).

Improvement in the convenience and economy of railroad service is going forward, on the largest scale in history, but physical betterments tend to be spotty rather than comprehensive. Capital expenditures emphasize equipment rather than fixed plant (which is harder to finance). In sum, the railroads (for very good reasons) do not yet have an all-embracing plan for the way the whole railway system might look years hence—the way the highway people planned and publicized in advance their interstate highway system.

There are two forces, though, that are working to favor further intensive development of railroads. One of these is growing traffic congestion around cities, which cannot be definitely resolved by further highway construction, because insufficient land is available. This concept was thoroughly developed in a well-documented talk on March 5 by Katy's John Barriger (and which is available in pamphlet form). The other factor favoring railroad expansion is the almost unanimous opinion, now achieved by informed citizens, that urban transit lines and rail suburban service must be retained and expanded in the public interest, and that railroads cannot be required to meet the deficits which such service may often entail.

Conclusive evidence of responsible citizens' recognition of this situation is given in a report just published on "Metropolitan Transportation Policies" by the Committee for Economic Development. In this report the committee says that "additional expenditures should be made on those transportation alternatives which provide the greatest excess of benefits over costs"—and what it means by costs is all costs, not just "user charges" that defray only a fraction of the total. How the committee feels about relative efficiency in the use of scarce and costly urban land is indicated by its observation that a railway track can move 40,000 people an hour, compared with 1,500-2,000 vehicles that a limited-access highway accommodates.

Railroads conserve scarce land

John Barriger contends that "only the railroads can provide the immense increments in volume and required advances in service standards, within practicable limits of additional investments." For railroads to be assigned by national leadership to the role that their economic and technological potentialities entitle them, could anything be more conclusive than a concrete demonstration of what an optimum stretch of railroad (equipped also at the optimum level) could do in the way of handling maximum traffic, at high speed, with minimum cost? There are several stretches of railroad in this country now that come almost up to this level.

The German Autobahn, back in the Thirties, was probably the prototype that put the idea of the U.S. system of superhighways into the minds of our highway and automotive leaders. The New Tokaido Line in Japan may be something of a prototype for railway passenger services, but if we need a prototype of an optimum freight-carrying line, it will probably be the North American railroads themselves that will have to build it.

Is it not likely that the nadir of the shift of freight traffic from railways has already been passed —and that the traffic trend should now continue upward? May not the low point in the decline in passenger traffic also be near at hand? Imaginative railroad men will answer such questions as these—not in words, but in deeds.

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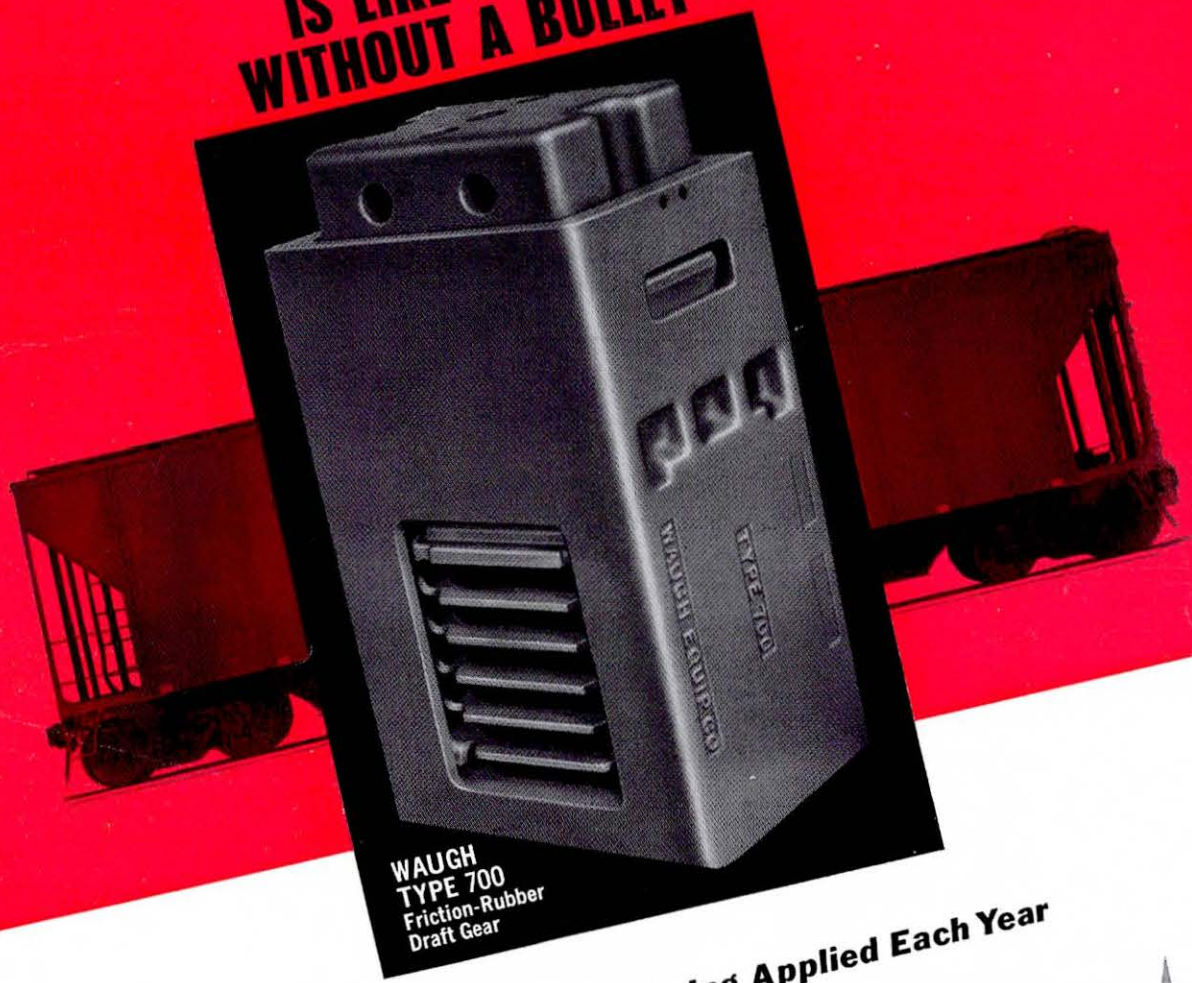

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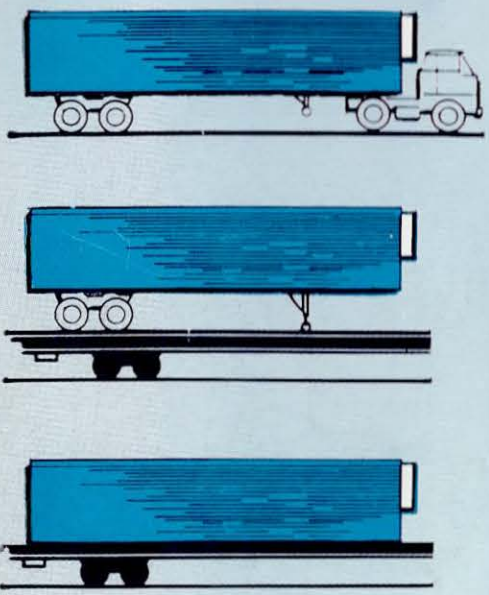

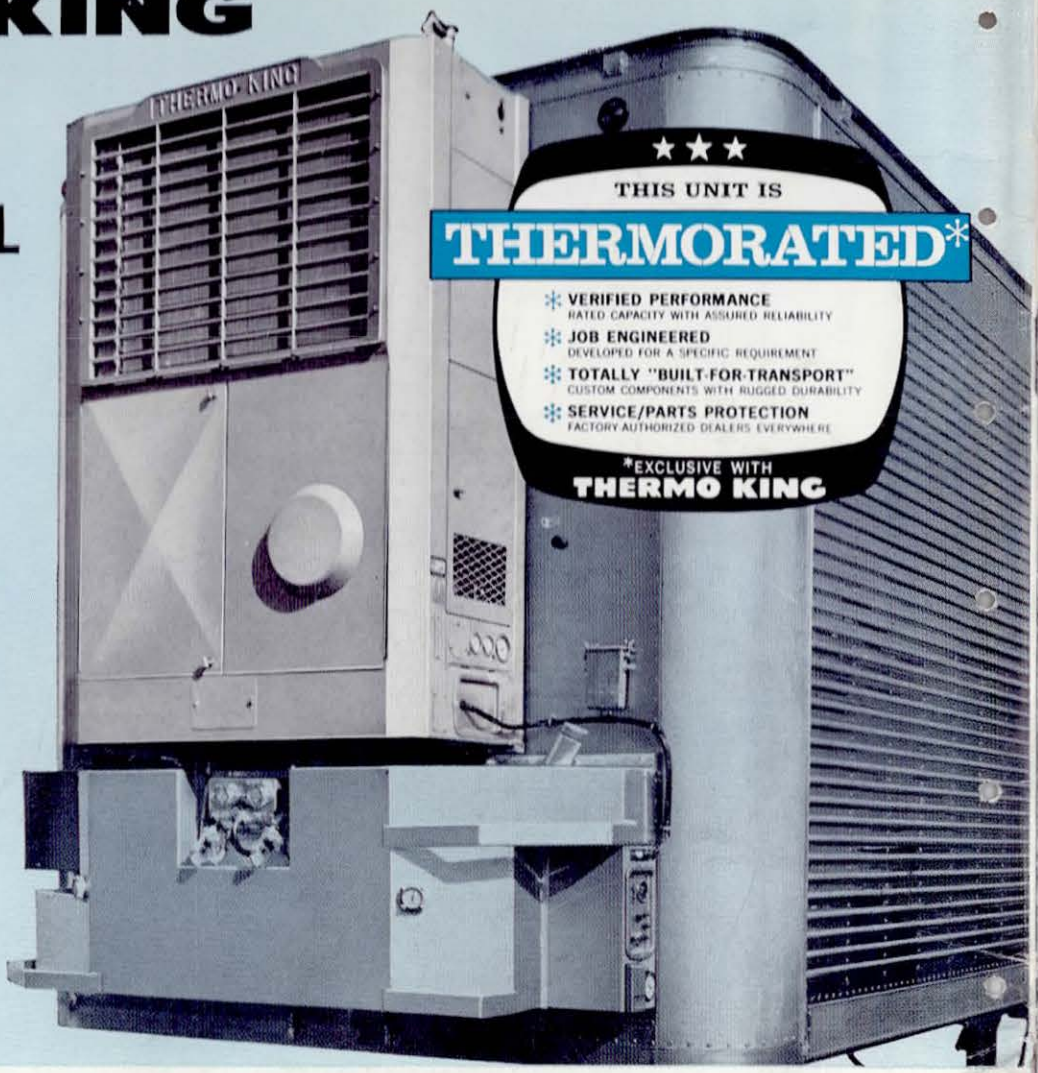

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